PRESENCE
PARTICIPATION
TRANSPORTATION
URBAN ENVIRONMENT
MILIEU URBAIN

review spring
revue printemps '71

community planning review

revue canadienne d'urbanisme

Spring '71
Volume 21, Number 1

Printemps '71
Volume 21, Numéro 1

1	President's Message Message du Président	Claude Langlois, National President, Président National
2	New National Director Le nouveau Directeur National	Ernest F. Tonge, National Director, Directeur National
4	Formation of Federal Ministry of Urban Affairs La Formation d'un Ministère Fédéral des Affaires Urbaines	Hon. Robert Andras
12	The Destruction of Urban Space	Kenneth R. Schneider
16	Participation, Communication The Halifax Conference La Conférence à Halifax	
21	La Ville Postmachiniste	Michel Lincourt
23	Transportation for Metropolitan Toronto	Henry R. Cooke
31	The Destruction of Urban Space (cont.)	Kenneth R. Schneider

Editor, Editeur — Ernest F. Tonge, National Director

Assistant Editor — Michael Fowlie

Quarterly publication by the National Office of the Community Planning Association of Canada.

Free reproduction in print, on Radio or T.V. permitted with acknowledgement.

Authorized as Third Class mail, Post Office Permit No. 3030, Ottawa.

Publication trimestrielle du Bureau National de l'Association Canadienne d'Urbanisme.

Reproduction écrite et électronique permise gratuitement, avec mention accordée à la Revue.

Autorisée, Troisième Classe, Permis Postal 3030, Ottawa.

PRESIDENT'S MESSAGE
DU PRESIDENT

Presence

In a period when participation is too often overridden by contestation, at a time when it seems that the different tiers of government are more than ever ready to cooperate with one another in finding viable solutions to the urban problems, the role and objectives of the Community Planning Association of Canada become of prime interest.

During the past few months I have had the opportunity to attend many of the numerous seminars, conferences and other activities organized by CPAC's Divisions and Branches all across Canada. The dynamism of our members and the more active participation of citizens, generally, has particularly impressed me, as has the close co-operation offered by all levels of government. Never in the past, has C.P.A.C. met with so much success in its programs.

This presence of our Association, more than ever before, must be pursued at all levels and in all parts of the country. It is a task that calls for a great deal from our members and it is most encouraging and rewarding to see that so many respond so well.

''Participate and Communicate'', the theme of our Fall National Planning Conference in Halifax, will be more than a three-day program, it will be the culmination of a whole year's endeavour.

Now, more than ever, C.P.A.C. must be present, and its presence must be felt.

Claude Langlois
National President

Présence

Dans une période où la contestation remplace trop souvent la participation active des citoyens, dans une période où il semble que les divers paliers de gouvernement sont prêts plus que jamais à coopérer pour trouver les solutions aux problèmes urbains auxquels nous devons faire face, le rôle et les objectifs de l'Association Canadienne d'Urbanisme prennent d'autant plus d'importance.

J'ai personnellement eu l'occasion durant les derniers mois d'assister à plusieurs des nombreuses activités et conférences mises sur pied par les Divisions et Sections de l'A.C.U. à travers le Canada. J'ai été particulièrement frappé par le dynamisme des membres et par la participation accrue des citoyens, par la co-opération très étroite qui existe de la part des divers ministères fédéraux et provinciaux ainsi que des municipalités. Jamais, dans le passé, l'A.C.U. a-t-elle connu autant de succès dans ses activités.

Cette présence de notre Association, nous devons plus que jamais continuer à l'assurer à tous les niveaux et dans toutes les parties du pays. C'est là une tâche que demande de la part des membres un dévouement accru et il est plaisant de voir que tous répondent aux aspirations de l'Association.

La participation et la communication, thème de notre congrès national qui sera tenu à Halifax en octobre prochain, ne sera pas la préoccupation de seulement quelques jours: elle se sera avérée notre préoccupation principale durant toute l'année.

Plus que jamais, nous devons être PRÉSENTS.

Claude Langlois
Président National

The inadvertent delay in the appearance of this first issue of the 'Community Planning Review' for 1971 has been due to a change, at quite short notice, in the staff of the National Office. André Lapointe, who in the short time he was with the Association introduced a number of valuable new concepts and ideas, early in the Spring, accepted an appointment with the Federal Government in the Department of the Secretary of State. He is now engaged in the important 'Opportunities for Youth' program.
Shortly after this in a nation-wide press release the National President announced that the National Council had appointed Ernest F. Tonge as National Director. Mr. Tonge has served C.P.A.C. for 10 years as the Executive Director of the Ontario Division and during that time earned a considerable reputation in the broad field of community planning throughout the Province.

In his announcement the National President stated that the new National Director has been charged with the responsibility of implementing the National Council's recently-adopted national policy for the Association, which is designed to ensure citizen involvement, on a regional and provincial basis, in the development of an Urban Affairs Policy for Canada.
The Association's new National Program will include a national first - CPAC's 'Urban Congress'. This will comprise a far-reaching series of events including a Canada-wide seminar on Urban Affairs, the compilation of a position paper in which all members and a broad range of other citizen and professional groups will be invited to participate and will culminate in a brief to the Federal Government, expressing a nation-wide citizen view-point on urban affairs. It is planned that the Urban Congress will become an annual feature of our national program.
In developing C.P.A.C.'s National Program, imaginative measures are proposed which will assure all members an opportunity to participate to the full, in all stages of the Association's decision-making processes; it will become, in truth, a 'citizen body'. It is not proposed that C.P.A.C.'s objectives change, but that the means of attaining them be updated. Each member will be encouraged to play his or her part in the vital work to which we are all dedicated.
One of the innovations shortly to be introduced is a data-processing system, which will enable members to take part in our nation-wide opinion polls and express their views on topical issues. To this end re-designed application and membership forms are being produced and members will shortly be invited to complete a questionnaire similar in form to that used in the recent Canada Census. It is hoped that all will co-operate to the full in this undertaking and provide as much detail as possible. Members are assured that only the information necessary for the formulation of a comprehensive statement of the membership's opinion, will be sought.
About a year ago as part of its far-sighted policy direction, the National Council established a Long-Range Planning Committee, with terms of reference to define a five-year goal for the Association, and a number of objectives, annual or otherwise, to guide our orderly advance toward this goal. The Committee's report is expected soon and the announcement of its proposals will undoubtedly do much to refocus our collective endeavours toward our raison d'être - "...to improve the quality of the environment in which people live".
No meaningful steps can be taken toward this aim without your help and without the help of hundreds of other dedicated citizens in all parts of Canada, with ideals and concerns similar to our own who, at present, are without the benefit of an established, nation-wide, citizen organization to assist them in the expression of their concerns and to render their individual efforts more effective by channelling them into a common cause. These are the people we need as new members and we need your help to reach them. One of our prime objectives at this time must be to increase our membership so that we may truly claim to be a Canada-wide, citizen voice on urban affairs and so that Government, at all levels, will recognize and respect this.
The President reflects this point of view in his message, in which he refers to C.P.A.C.'s image as its 'presence' - its enviable reputation earned over the years, by our members' devotion to its principles, but which must continually be nurtured by sound programs and hard work.

New National Director... New National Program

Le fâcheux retard dans la publication du premier numéro de la Revue Canadienne d'Urbanisme pour cette année, est le résultat d'un changement de personnel au Bureau National. André Lapointe, qui durant son court stage avec l'Association avait introduit un certain nombre de bonnes idées et de nouveaux concepts, a accepté un poste au Secrétariat d'état du Gouvernement Canadien. Il participe actuellement à l'important programme "Perspective-Jeunesse".

Quelque temps plus tard, le Président National annonçait dans un communiqué de presse distribué à travers le Canada, la nomination de M. Ernest F. Tonge au poste de Directeur National. Durant 10 ans, M. Tonge a servi l'A.C.U. en qualité de Directeur Administratif pour la Division de l'Ontario et durant cette période, il s'est mérité une excellente réputation dans les milieux intéressés à l'urbanisme à travers cette province.

Nouveau Directeur National ...Nouveau Programme National

Dans son communiqué, le Président National a déclaré que le nouveau Directeur National a été chargé de la mise en oeuvre de la politique nationale de l'Association telle qu'adoptée récemment par le Conseil National.

Cette politique vise à l'intégration du citoyen ordinaire dans le processus nécessaire au développement d'une politique urbaine canadienne.

Le nouveau programme national - "Le Congrès Urbain" - se traduira en une série d'activités importantes dont un seminar à travers le Canada et la préparation d'un document-cadre auquel participeront l'ensemble des membres ainsi qu'un large éventail d'autres citoyens et de groupements professionnels. Le "Congrès Urbain" se terminera par la présentation d'un mémoire au Gouvernement Canadien pour exprimer le point de vue des citoyens à travers le Canada sur l'orientation des politiques urbaines. On envisage actuellement faire du "Congrès Urbain" un évènement annuel de l'Association.

Le programme national de l'A.C.U. prévoit la mise en oeuvre de procédures innovatrices pour assurer la participation des membres sur tous les aspects du processus nécessaire à la prise de décisions; l'Association deviendra véritablement un organisme de citoyens. Il n'est pas question de modifier les objectifs de l'A.C.U. mais bien de faire une mise à jour parmi les moyens utilisés pour les atteindre.

Chaque membre sera invité à participer à part entière au travail important auquel chacun de nous est dédié.

On introduira très bientôt un système pour le traitement des données; ce système permettra à nos membres de participer à des recensements d'opinion à travers le pays et d'exprimer leurs points de vue sur des sujets d'actualité. A cette fin, les membres seront bientôt invités à compléter un questionnaire semblable à celui utilisé au cours du récent recensement. Il est à espérer que chacun collaborera pleinement en fournissant le plus de détails possible. Nous vous assurons que seule l'information pertinente à la formulation de synthèses compréhensives des opinions des membres sera recherchée.

Il y a environ un an, le Conseil National a formé un comité pour la planification à long terme et lui a donné pour mandat l'élaboration d'un plan de 5 ans qui incluera la définition des objectifs intermédiaires. Le rapport de ce comité est attendu bientôt et son contenu réorientera sans doute nos efforts collectifs vers "l'amélioration de la qualité du milieu où vivent les populations", laquelle est notre raison d'être.

Aucun progrès ne peut être réalisé dans cette direction sans votre aide et sans l'aide de centaines d'autres citoyens qui, à travers le Canada, partagent nos objectifs mais qui, à l'heure actuelle, n'ont pas l'avantage d'être regroupés au sein d'un organisme bien établi qui pourrait les aider à exprimer leurs opinions et y ajouter du poids en les canalisant vers un objectif commun. Ce sont eux que nous devons recruter et pour y arriver, nous avons besoin de votre aide. Un de nos objectifs prioritaires doit être l'augmentation du nombre de nos membres afin que nous puissions réellement nous réclamer d'être un groupe conséquent et bien informé sur les questions d'urbanisme, et pour que les Gouvernements, à tous les niveaux, nous reconnaissent et nous respectent comme tel.

Le Président fait valoir ce point de vue dans son message lorsqu'il traite de la "présence" de l'A.C.U. et de l'image qu'elle projette. Cette présence, au cours des années, lui a valu une réputation enviable mais elle doit être continuellement renouvellée à l'aide de programmes compréhensifs et d'efforts sérieux.

HON. ROBERT ANDRAS ANNOUNCES

Formation of Federal Ministry of Urban Affairs

On Wednesday May 26th., 1971 in his address to the 700 delegates to the First International Conference on Cities sponsored by NATO at Indianapolis, the Hon. Robert Andras, (since appointed as Minister of State for Urban Affairs) outlined his policies for the new Ministry and of his commitment to develop new political and policy- making mechanisms in the field of Urban Affairs.

The Minister opened his remarks by stating that, in Ottawa that afternoon, the federal parliament was expected to pass bill 207 and said:

"Among other things, this bill will establish Canada's first Ministry of State for Urban Affairs. It will be my pleasure to be Canada's first federal Minister of State for Urban Affairs and assume the responsibility of creating a new institution to cope with the mounting issues of a rapidly urbanizing Canada.

Now - before you sigh and suspect that I am subjecting you to some kind of Canadian promotional pitch - or my personal ego-trip - let me hasten to say that I have chosen to talk about this event - in the context of 'Requirements for Effective Innovation.'

In doing so - I hope it will be of some value to hear of **our beginning** of a process - a political process - of urban policy making. So it is on this aspect that my comments will concentrate - the process of public policy making is an interrelated complex field such as urban affairs - rather than on the specifics of that urban policy.

So, this morning, I would like to speak not as an urban expert — since I am sure that one of my staff could more appropriately deliver a scholarly paper — but as the political member of a government who, over the past two years, worked against many tides to slowly develop a commitment to three objectives: (1) to the need in Canada for a national urban policy, (2) to the importance of developing new instruments of policy making, and (3) to the requirement for new institutional mechanisms to bring together those who make decisions affecting cities — our federal, provincial, and municipal governments and the people — in order to define our objectives and priorities.

To urban experts these objectives perhaps reflect the conventional wisdom of our time. And yet these are goals that have not been widely shared or effectively pursued in our society and I suspect in many of yours.

I do not wish to imply that what we have done or are attempting to achieve is either great or dramatically new. Perhaps our uniqueness lies in our **commitment** to develop new political and policy-making mechanisms.

For many of our societies abound with grand designs for achieving political or administrative reforms. And although the will and expertise to develop the broad policy frameworks which our complex economies and societies demand is a difficult enough process, the real test comes in seeking their implementation. The complex formal organizations, the public bureaucracies, and private institutions, as well as the fragmentation among political jurisdictions, all work to prevent changes in our traditional ways of coping with national problems. I am sure that there is no need for me to document the obstacles which face those who seek to define and operationalize metapolicies or even new specific policies.

I said that our first objective has been to seek support for a national urban policy. Let me detail how we in Canada are moving towards this objective.

Two years ago, I accepted Ministerial responsibility for federal housing policies and what was vaguely known as several federal programs which affected Canadian cities. My predecessor had just resigned from the Cabinet, in part, because of some of the housing and urban policies he advocated, in their intrusion into the constitutional jurisdiction of provincial governments, were rejected by the government. He led an extremely visible public Task Force on Housing and Urban Affairs which politicized urban and housing problems throughout the country although little substantive research was conducted by this commission. The prime "urban" recommendation of the report of the Task Force was a call for the establishment of a federal Department of Urban Affairs, modelled only in part on the U.S. Department of Housing and Urban Development. This recommendation was not accepted by the government at that time (1969).

Partly as a result of my predecessor's resignation and his Task Force Report, "urban affairs" had become a highly visible political issue in Canada by 1969, but the level of understanding of urban problems, at least among the principal political actors

L'HONORABLE ROBERT ANDRAS ANNONCE

La Formation d'un Ministère Fédéral des Affaires Urbaines

Durant son discours aux 700 délégués à la Première Conférence Internationale sur les Villes organisée sous le patronage de l'OTAN à Indianapolis le 26 mai dernier, l'Honorable Robert Andras (récemment appointé Ministre d'Etat des Affaires Urbaines) donna un aperçu de ses politiques envers le nouveau ministère et son intention de développer des méchanismes pour faciliter la prise de décisions dans le domaine des affaires urbaines.

Le Ministre déclara à cette occasion que le projet de loi 207 passerait probablement au parlement fédéral à Ottawa cette journée même, et continua son adresse expliquant que:

''Ce projet de loi créera, entre autres choses,.... le premier département des Affaires urbaines. J'aurai l'honneur d'être le premier ministre d'Etat chargé des Affaires urbaines au Canada et d'assumer la responsabilité de créer une nouvelle institution qui s'occupera des questions de plus en plus nombreuses de l'urbanisation rapide du Canada.

A présent, avant que vous ne soupiriez et ne soupçonniez que je suis sur le point de vous soumettre à une sorte de propagande canadienne ou personnelle, je m'empresse de dire que j'ai choisi de discuter de cet événement dans le contexte ''des besoins d'innovation efficace''.

Ce faisant, j'espère qu'il vous sera de quelque utilité de connaître ***nos débuts*** *dans un procédé politique d'urbanisme. Voilà bien l'aspect sur lequel je concentrerai mes commentaires, car le procédé d'élaboration d'un programme public est un domaine connexe compliqué tout comme les affaires urbaines, plutôt que sur les distinctions de cette politique d'urbanisme.*

C'est pourquoi, ce matin, je tiens à vous entretenir non pas à titre d'expert en urbanisme puisque je suis certain qu'un membre de mon personnel pourrait vous présenter de façon plus adéquate une causerie savante, mais comme représentant politique d'un gouvernement qui, depuis deux ans, a travaillé à l'encontre de bien des idées au développement graduel d'un engagement à l'égard de trois objectifs: (1) le besoin d'une politique d'urbanisme nationale au Canada, (2) l'importance de trouver de nouveaux instruments d'élaboration d'un programme, et (3) la nécessité de nouveaux mécanismes institutionnels en vue de réunir ceux qui prennent des décisions touchant les villes, nos gouvernements fédéral et provinciaux ainsi que les administrations municipales et le peuple, afin de définir nos objectifs et priorités.

Il est possible que pour les experts en urbanisme ces objectifs reflètent la sagesse conventionnelle de notre temps. Et cependant, ce sont des objectifs qui n'ont pas reçu la faveur de beaucoup de gens et qui n'ont pas été poursuivis efficacement dans notre société ni j'imagine chez nombre des vôtres.

Je ne veux pas insinuer que ce que nous avons fait ou tentons de réaliser est considérable ou dramatiquement nouveau. Notre originalité réside peut-être dans notre ***engagement*** *à mettre au point de nouveaux mécanismes politiques visant l'élaboration de programmes.*

En effet, bon nombre de nos sociétés foisonnent de grands projets en vue de réformes politiques ou administratives. Et même si la volonté et l'expertise nécessaires à l'établissement des larges cadres politiques que notre économie et nos sociétés complexes requièrent constituent en elles-mêmes un procédé assez difficile, la véritable épreuve consiste à en chercher la mise en vigueur. Les organismes officiels complexes, la bureaucratie publique aux divers paliers et les institutions privées ainsi que la division des pouvoirs politiques contribuent tous à prévenir des changements dans nos façons traditionnelles de traiter les problèmes nationaux. Il n'est pas nécessaire, j'en suis certain, de faire la preuve documentaire des obstacles auxquels doivent faire face ceux qui cherchent à définir et à mettre en pratique des métapolotiques ou même de nouvelles politiques précises.

J'ai dit que notre premier objectif consiste à rechercher des appuis à l'égard d'une politique urbaine nationale. Qu'il me soit permis d'expliquer de quelle façon nous, au Canada nous acheminons vers cet objectif.

Il y a deux ans, j'ai accepté la responsabilité ministérielle de la politique fédérale du logement et de plusieurs programmes fédéraux peu connus touchant les villes canadiennes. Mon prédécesseur venait tout juste de quitter le cabinet, en partie parce que le gouvernement refusait certaines des politiques qu'il préconisait en matière de logement et d'affaires urbaines, en raison du fait qu'elles empiétaient sur les pouvoirs constitutionnels des gouvernements provinciaux. Il a dirigé une commission d'étude fort connue en matière de logement et

andras announces

at all levels of government, if not among the experts, was severely limited. The traditional cry of local governments: "Give us the money and we'll do the job." was a dominant cry. Similarly, the provinces repeated the message and did not welcome any federal initiatives. If one defined a housing shortage: then build more houses. Too much traffic congestion: build more roads. Too many slums: clear them. An extremely limited recognition of the interdependence of urban problems. The notion of a national urban policy was not present in public dialogue on the problems of Canadian cities.

Many municipalities tended to see solutions to their problems in cash transfers from the federal government. Attention was not directed to a search for real policy levers which have a far more profound affect on the urban process. Further, an extremely rigid program of city core urban renewal historically focussed municipal attention on core slum clearance as a major solution to urban problems. To a large extent we had simply adapted an American program with all its defects and a limited understanding of its consequences. In many ways, this program which is heavily financed by the federal government tended to narrow the vision of municipal and other leaders to an expensive process of core clearance without any clear notion as to what the objectives were, and with limited understanding of the consequences.

Well, within a few weeks of accepting this job in 1969, I cancelled federal funding of any new urban renewal scheme implementations in Canada. Many of you in this room will appreciate the short term political costs of cutting off such a program which was a ready source of funds to cities. We paid the political costs and started a hue and cry across the country for the federal government to solve the problems of the cities.

In a sense, the ball was with us to provide the direction and a basis for a more complete and rational approach to urban problems. Well, I launched an urban study. It was a relatively in-depth, expert, and independent (of the public service) analysis of urbanization in Canada. The purpose of this was to educate us at the federal level, the other levels of government, and the people of our country and bring us to a common basis for understanding urban problems and the basic alternatives for dealing with them. The resulting report was tabled in our House of Commons early this year and is just now beginning to penetrate the various urban constituencies.

I will not go into detail as to its findings other than to state that this study has moved us a considerable way in our understanding of urbanization in Canada — its specific manifestations in individual cities, and its national consequences.

In the publication of this study, and in my endeavours and the efforts of the federal government, we have sought to launch a public dialogue on what exactly is "happening" in urban Canada, on what our urban problems are, on the future projections of urban growth in a sparsely populated but urban-concentrated nation, in the specific problems of the micro system as well as the national consequences of the highly interdependent macro system.

To some extent, our ability to communicate the complex nature of urban problems, the connectedness of the national urban system, and the need for a national urban policy, rests on a simple message: the demographic picture of Canada that we forecast for the year 2,000.

By the year 2,000 in the unconstrained future, almost one half of Canada's estimated population of about 40 million — which represents a doubling of our present population within thirty years — will live in three cities: Toronto, Montreal and Vancouver. The bulk of Canada's population will reside in 12 urban centres.

To a nation that straggles across a thin line for 3,000 miles along the U.S. border, the dominance of three such urban centres, and the relative rustic isolation and poverty of the remaining bulk of our vast country, has argued more strongly than anything else for national policy.

Our second basic objective, was the need to develop new mechanisms of public policy formulation within the federal government.

Canada is a parliamentary democracy. In 1968, our Prime Minister effected a reorganization of the major decision-making mechanism, the Cabinet, by structuring its activities into four functional committees, each headed by a Minister who also held a departmental portfolio. While the efficiency of Cabinet was greatly increased, and the Prime Minister's office and department became more of a coordinating agency with our Treasury Board and Finance Department, this was only a first step. For the basic organization of the government remained the same,

andras annonce

d'affaires urbaines, laquelle a politisé les problèmes afférents dans tout le pays sans toutefois effectuer beaucoup de recherches. La recommandation primordiale du rapport de la commission en matière "d'urbanisme" visait l'établissement d'un ministère fédéral des Affaires urbaines qui se modèlerait seulement en partie sur le Department of Housing and Urban Development des Etats-Unis. La recommandation fut rejetée par le gouvernement en 1969.

Les "affaires urbaines", en partie à cause de la démission de mon prédécesseur et du rapport de sa Commission d'étude, étaient devenues une question politique notoire au Canada en 1969. Le peu de compréhension des problèmes urbains, sinon parmi les experts, du moins de la part des hommes politiques intéressés, se manifestait à tous les niveaux de gouvernement. Le cri traditionnel: "Donnez-nous l'argent et nous accomplirons la tâche" montait de tous les gouvernements locaux. Les provinces reprenaient le même message et acceptaient mal toute initiative fédérale. S'il y a pénurie de logement: que l'on construise alors plus de maisons; pour une circulation trop dense: que l'on construise plus de routes; trop de taudis: la démolition. On accordait fort peu d'attention à l'interdépendance des problèmes urbains. La notion d'une politique nationale en matière d'urbanisme était absente du dialogue public sur les problèmes des villes canadiennes.

Nombre de municipalités avaient tendance à ne voir la solution de leurs problèmes que dans les subventions fédérales. On ne se souciait guère de rechercher les leviers d'une véritable politique beaucoup plus efficaces en matière d'urbanisme. De plus, un programme extrêmement rigide de rénovation urbaine du centre-ville retenait l'attention des municipalités sur la démolition des taudis désormais considérée comme solution importante des problèmes urbains. Dans une large mesure, nous avions tout simplement adapté un programme américain avec toutes ses déficiences et une connaissance restreinte de ses conséquences. De bien des façons, ce programme réalisé grâce à de fortes subventions du gouvernement fédéral, tendait à restreindre le champ de vision des autorités municipales et autres à un procédé dispendieux consistant à déblayer un noyau sans trop connaître les objectifs à atteindre et sans comprendre assez les conséquences d'une telle politique.

Or, quelques semaines seulement après mon arrivée à ce poste en 1969, j'ai annulé la participation fédérale au financement de toute nouvelle mise en oeuvre de programmes de rénovation urbaine au Canada. Nombre d'entre vous ici présents comprendrez l'impopularité au point de vue politique d'une telle mesure, du moins à court terme, puisqu'elle supprimait un programme qui constituait une source facile de revenus pour les villes. Aussi avons-nous accepté ce risque et il s'ensuivit une clameur générale dans tout le pays exigeant l'aide du gouvernement fédéral à la solution des problèmes de nos villes.

D'une certaine façon, l'occasion nous était offerte de prendre en main la direction des affaires urbaines, de leur donner une plus grande portée et de les traiter d'une façon plus rationnelle. Nous avons alors procédé à une étude technique assez détaillée et objective des phénomènes de l'urbanisation au Canada (indépendamment de la Fonction publique). Le but était de procurer les données essentielles au gouvernement fédéral, aux autres paliers de gouvernement et au peuple en général, en vue d'une compréhension commune des problèmes urbains et des choix fondamentaux de solutions. Le rapport qui en est résulté a été déposé à la Chambre des communes au début de l'année et les diverses circonscriptions urbaines commencent tout juste à en prendre connaissance.

Je n'ai pas l'intention de parler en détail des constatations qu'il renferme, mais cette étude a contribué énormément à nous faire comprendre l'urbanisation au Canada, ses manifestations propres dans chaque ville et ses conséquences à l'échelle nationale.

Dans la publication de cette étude de même que dans mes activités personnelles et dans celles du gouvernement fédéral, nous avons cherché à entamer un dialogue public sur "ce qui se passe" exactement au Canada urbain, sur la nature de nos problèmes urbains, sur les projections d'avenir de la croissance urbaine au sein d'une population de faible densité, mais fortement concentrée dans les villes, sur les problèmes particuliers de ce mécanisme à l'échelle locale aussi bien que sur ses conséquences éminemment interdépendantes dans l'ensemble du système.

Dans une certaine mesure, notre aptitude à exprimer la nature complexe des problèmes urbains, la

andras announces

with almost thirty Ministers, each representing a horizontal department or agency, forming the Cabinet. And, partly because of the notion of Cabinet responsibility, the coordinating functions of the central agencies were only marginally improved.

But in launching the major urban study, I referred to earlier, a model of a policy making mechanism was suggested not only in the report of the study but in the very way in which we organized this quasi-official research and policy process. A small, tightly co-ordinated group of external and public service experts directly reporting to me, as a Minister and member of the Cabinet, conducted our urban study. And while there is nothing terribly novel about such an approach to policy making, its impact on the Canadian political and administrative process was great.

In our dialogue with the Prime Minister and other key actors about the federal role in urban affairs, the study led to a second step. For in my rejection of the traditional concept of a Department of Urban Affairs and Housing, with its policy making and massive program delivery apparatus, we argued that because of the interrelatedness and all inclusiveness of "urbanization", we preferred the establishment of a research, policy making and coordinative Ministry with no delivery system and no direct program responsibility. That new type of Cabinet Ministry then, is at the root of the Ministry of State concept we are introducing.

The reasons for creating, in the urban sector, such a small highly expert mechanism reporting directly to a Minister and hence with full access to Cabinet, also argued for the need for such mechanisms in other sectors. This has led to the reorganization of the Cabinet structure by seeking to create about five new Ministries to be known as Ministries of State for designated purposes.

We have followed up our urban study by beginning to build a new urban Ministry and our strong commitment is to maintain the organization as a highly expert and extremely small group whose primary function will be research, policy development and coordination within and between governments. Only time will demonstrate if our Ministry and other new Ministries of State will become effective instruments of policy making and coordination in the complex and tradition-ridden governmental world used to large bureaucracies. But we have taken the first step and our enthusiasm and commitment is strong.

The Ministry's role as a focus and source of policy development for urbanization in Canada will have three characteristic features:

(a) It will be **co-ordinative** in its method of developing comprehensive urban policies, based on continuing research, and primarily oriented to the federal presence and initiative.

(b) It will be **supportive** to the current and future urban programmes maintained and developed by other federal agencies and having direct urban influence from coast to coast. In this process, my Ministry will not attempt to duplicate existing delivery facilities, nor to take them over.

(c) It will have a **consultative** position in relation to the federal, provincial and local governments' responsibilities in city and municipal matters. The Ministry is committed to developing a broadly-based and highly visible and continuing consultative forum and process involving the federal government, the Provinces and the Municipalities and Urban communities, in order to build the broadest possible understanding for the process or urbanization and, thereby, initiating a consensus in the building of national policies and federal initiatives.

That consultative function of our Ministry brings me to my third basic objective which is to seek to establish new institutional mechanisms to bring together those who make decisions affecting cities, the federal, provincial and municipal actors. This is perhaps our most difficult and intransigent problem.

Canada is a federal system and our constitution reserves municipal affairs to the jurisdiction of the provinces. Two years ago even the federal government had not realized the tremendous impact that its activities had upon the cities of the nation. Our urban study documented 117 federal programs operating through 27 departments and agencies of the federal government which have a direct effect on the shape and growth of Canadian cities. And although this fact may have not been news to some in Canada, it was a startling revelation to all governments.

For although "municipal affairs" is clearly in the jurisdiction of the provinces, the involvement of the federal government in urban affairs was also clearly demonstrated and the absence of any coordinating process between the varied federal programs administered by numerous separate agencies and the

andras annonce

continuité du système urbain national et le besoin d'une politique urbaine nationale, repose sur un simple élément d'information: l'image démographique du Canada que l'on prévoit pour l'an 2000.

Vers l'année 2000 d'un avenir incertain, presque la moitié de la population estimative du Canada qui s'établira à environ 40 millions d'âmes - soit le double de notre population actuelle d'ici trente ans habitera trois villes: Toronto, Montréal et Vancouver. La masse de la population canadienne se répartira dans 12 agglomérations urbaines.

Pour une nation dispersée étroitement sur une frontière de 3,000 milles avoisinant les Etats-Unis, la prédominance de trois de ces agglomérations urbaines ainsi que l'isolement plutôt rustique et la pauvreté qui existent dans le reste de notre vaste pays, sont autant de facteurs qui ont milité le plus fortement en faveur d'une politique nationale.

Notre second objectif fondamental était de trouver de-nouveaux mécanismes visant à formuler une politique publique au sein du gouvernement fédéral.

Le Canada est une démocratie parlementaire. En 1968, notre premier ministre a réorganisé le principal mécanisme d'élaboration des décisions, soit le cabinet, en répartissant ses activités entre quatre comités fonctionnels, chacun sous la direction d'un ministre qui détenait également un portefeuille. Bien que l'efficacité du cabinet se soit accrue considérablement et que le bureau du premier ministre et le le ministère soient devenus davantage une agence de coordination auprès du Conseil du Trésor et du ministère des Finances, ce n'était là qu'un premier pas. En effet, l'organisation fondamentale du gouvernement est demeurée la même, avec près de trente ministres, chacun représentant un ministère ou une agence à l'échelon horizontal de la hiérarchie, constituant ainsi le cabinet. Et, partiellement en raison du concept de la responsabilité du cabinet, les fonctions coordonnatrices des agences centrales n'ont été que faiblement améliorées.

Lors de la création de la principale étude en matière d'urbanisme, dont j'ai fait mention plus tôt, un modèle de mécanisme d'élaboration des décisions s'est manifesté non seulement dans le rapport de l'étude, mais dans la façon même dont nous avons organisé cette méthode quasi officielle de recherche et d'orientation. Un groupe restreint mais étroitement uni d'experts tant de l'extérieur que de la fonction publique, dont j'étais directement responsable à titre de ministre et de membre du Cabinet, a effectué cette étude. Bien qu'il n'y ait rien de tellement nouveau dans une telle méthode d'élaboration des décisions, son influence a été considérable sur le processus politique et administratif au Canada.

Dans notre échange de vues avec le premier ministre et les autres autorités fédérales en affaires urbaines, l'étude a donné lieu à une deuxième phase. En effet, en raison de ma répudiation du concept traditionnel d'un ministère des Affaires urbaines et du Logement et de son mécanisme d'élaboration des décisions et de mise sur pied de programmes en série, nous avons soutenu qu'en raison du caractère d'interdépendance et du caractère global de ''l'urbanisation'', nous avions opté pour un ministère d'élaboration et de coordination des décisions sans responsabilité directe quant aux programmes. Ce nouveau genre de département conseil est alors à l'origine du concept de département d'Etat que nous présentons.

Les raisons de la création dans le secteur urbain, d'un mécanisme aussi restreint de hautes compétences relevant directement d'un ministre et ayant par conséquent libre accès au cabinet ont aussi milité en faveur de tels mécanismes dans d'autres secteurs. Il en est résulté une réorganisation des cadres du cabinet par la formation d'environ cinq nouveaux départements connus sous le nom de départements d'Etat, aux fins désignées.

Nous avons donné suite à notre étude sur l'urbanisme en créant d'abord un nouveau département de l'urbanisme, et notre engagement formel consiste à restreindre l'organisation à un petit groupe de hautes compétences dont les principales fonctions seront la recherche, l'élaboration de programmes et la coordination au sein des gouvernements et entre ces derniers. Le temps seul nous dira si notre département et d'autres départements d'Etat deviendront des instruments efficaces d'élaboration des programmes et de coordination dans le monde gouvernemental complexe, chargé de traditions et esclave des lourdes bureaucraties. Mais nous avons fait le premier pas et notre enthousiasme autant que notre engagement sont intenses.

Le rôle du département en tant que point de mire et de source d'élaboration de programmes d'urbanisme au Canada comprendra trois traits caractéristiques:

equally fragmented activities of other governments was also clearly defined.

Well, we have started, in the establishment of an institution to serve as a federal focal point in urban affairs, a point for coordination. We have also launched a process with the ten provincial governments to bring the federal government, the provinces and the representatives of the cities into the same room. Last month, for the first time in Canadian history, we actually met as three levels of government and made some real progress towards creating machinery for continued dialogue among the three parties.

But, I have no illusions about the difficulties in seeking to coordinate the disparate urban activities of many levels of government. And I cannot offer today to you any new wisdom or any new models of coordinative processes which show the way. This remains a central dilemma of government in all societies, especially in federal systems.

But perhaps, in the final analysis, we have to count on the leadership and commitment of those in public life to constantly seek ways to make governments more responsive to the real needs of the people, to examine and constantly question the separate bureaucratic empires in every society, to build into our thinking the flexibility to accept new ideas and new ways of solving old problems."

(a) Coordonner dans ses méthodes d'élaboration de programmes d'ensemble sur l'urbanisme, fondés sur des recherches continues, et orientés surtout vers la présence et l'intervention fédérales.

(b) Appuyer des programmes urbains actuels et éventuels soutenus et mis en valeur par les autres organismes fédéraux et exerçant une influence directe sur l'urbanisme dans tout le pays. Dans ce processus, mon département ne tentera pas de faire double emploi avec les méthodes existantes d'exécution ni de les faire siennes.

(c) Se prêter aux consultations quant aux responsabilités des gouvernements fédéral et provinciaux ainsi que des administrations des villes et municipalités dans les affaires qui intéressent ces dernières administrations. Le département s'engage à instituer une tribune et une méthode élaborées à la portée du grand public pour fins de consultations constantes et engageant le gouvernement fédéral, les provinces ainsi que les municipalités et les communautés urbaines, de façon à assurer la plus large compréhension possible du progrès de l'urbanisme et créant ainsi un accord dans l'élaboration de politiques nationales et d'initiatives fédérales.

Cette fonction consultative de notre département m'amène à mon troisième objectif fondamental qui consiste à tenter d'établir de nouveaux mécanismes institutionnels visant à réunir ceux qui prennent les décisions touchant les villes, les autorités fédérales, provinciales et municipales. Voilà peut-être notre problème le plus difficile et le plus épineux.

Selon le système fédéral et la constitution du Canada, les affaires municipales relèvent des provinces. Il y a deux ans, même le gouvernement fédéral ne s'était rendu compte de l'influence formidable que ses activités exerçaient sur les villes du pays. Notre étude de l'urbanisme a démontré que 27 ministères et organismes du gouvernement fédéral réalisaient 117 programmes fédéraux qui exerçaient une influence directe sur l'aspect et la croissance des villes canadiennes. Et bien que certains Canadiens aient pu être au courant de cet état de choses, il s'agissait d'une révélation renversante pour tous les gouvernements.

"Quoique les "affaires municipales" relèvent nettement des provinces, l'engagement du gouvernement fédéral dans les affaires urbaines a aussi été clairement démontré. L'absence de toute méthode de coordination entre les divers programmes fédéraux administrés par nombre d'organismes distincts et entre les activités aussi disparates d'autres gouvernements a de même été définie de façon évidente.

Nous avons donc posé les fondements d'une institution qui servira de point de ralliement fédéral et de coordination des affaires urbaines. Avec l'aide des dix provinces, nous avons également établi un processus visant à réunir les gouvernements fédéral et provinciaux ainsi que des représentants municipaux en un même endroit. De fait le mois dernier, pour la première fois dans l'histoire du Canada, nous nous sommes réunis en notre qualité de représentants des trois paliers de l'administration et nous avons réalisé de véritables progrès dans la mise au point d'un mécanisme de dialogue continu entre les trois parties.

Je ne me fais cependant pas d'illusion au sujet des difficultés que nous rencontrerons dans la coordination des activités urbaines disparates à de nombreux paliers administratifs. Et je ne puis vous apporter aujourd'hui une nouvelle sagesse ou de nouvelles méthodes de coordination qui serviront de modèles. Cette situation demeure un dilemme important pour le gouvernement de toutes les sociétés, particulièrement dans un système fédéral.

Mais en fin de compte, peut-être devrons-nous compter sur les qualités de chef et l'engagement des hommes publics pour chercher constamment des façons de rendre le gouvernement plus attentif aux véritables besoins du peuple, pour étudier et mettre constamment en cause les empires bureaucratiques distincts de chaque société et pour inclure dans notre façon de voir la souplesse qui nous permettra d'accepter des idées nouvelles et de nouvelles façons de résoudre de vieux problèmes.

A la lumière des discussions de la présente conférence, il me tarde de connaître les nombreuses façons par lesquelles les autres gouvernements cherchent à faire face aux problèmes des villes et j'apprécie hautement l'occasion qui m'a été donnée de vous rencontrer tous.

The Destruction of Urban Space

KENNETH R. SCHNEIDER

COPYRIGHT 1970, BY ENO FOUNDATION FOR TRANSPORTATION, INC., SAUGATUCK, CONNECTICUT

Mr. Schneider is a city planner and consultant now living in New Jersey. He has recently served as consultant at the Centre for Housing, Building and Planning at the United Nations. He was previously Chief of Mission for CARE in Jordan and Sierra Leone, special representative for CARE in the Philippines, and he has five years of city-planning experience in California since graduating from the University of California at Berkeley. His professional affiliations include the American Institute of Planners, the Society for International Development, and the Society for College and University Planning. He is the author of many articles and of Destiny of Change: How Relevant Is Man in the Age of Development?, *published in* 1968 *and soon to be published in Japanese.*

WHILE we may acknowledge its lineage, the twentieth-century metropolis is already an unique artifact of history. Its general scale of population is tenfold larger than it was in 1850. Its land area is larger still. It has a radically new form which is dominated by transportation, industry, and commerce—an enormous functionalism that could not have been conceived in 1800. At the foundation of the new metropolitan scale and form are civilization's most penetrating and directive innovations: audacious technology with its social imperatives, and systematic bureaucracy with its sophisticated grasp of society. The new metropolis is unique, however, mainly because these radical transformations have redefined the whole existence of the individual.

For a brief demonstration we might imagine Horace Greeley reappearing among us, going West himself on a journalistic assignment to see what the young men he had advised to go West had actually accomplished in a little more than a century. Of course, he would take a jet and then a helicopter into Los Angeles. There he could examine the new, slick, unadorned buildings, and observe the rule of the automobile in the downtown area. From the massive garage under Pershing Square he could then be driven on a tour over the country's most elaborate web of freeways, stopping at a shopping centre, college campus, aerospace plant, drag race, television studio, and scientific laboratory. The brief tour might conclude with a visit to Disneyland for a compression of the striking contrasts he had seen.

Greeley would learn from his host that there are nearly five million vehicles in the area and that a high proportion are used for commuting trips up to thirty and forty miles distance. He would be told of the accident problem and would have seen the congestion and smog himself.

Greeley's queries would reveal that only a few of the massive activities he had seen were more than thirty years old. And few of their antecedents are beyond the memory of the older residents of this the most American of cities. Yet they plainly characterize the life of the people, if they do not dominate that life.

After his tour Greeley would prepare his dispatch about the twentieth-century metropolis, and conclude it as follows:

Such a reconstellation of urban life is quite a feat for any civilization. Of course Los Angeles didn't do it alone. This city of much land and much speed but little time and hardly an ounce of relaxed humanity is merely a decade or so ahead in the economically impelling momentum of creating an absolute monopoly of the environment by faster machines and stronger organizations.

All that I have seen points to an astonishingly precise control over human and mechanical action. But, as much as I look, I do not see that this is matched by a similarly precise control over the results of action.

The people of Los Angeles are thus creating a freedom of the road for powerful machines and a freedom of action for powerful organizations. But in doing so they are horse-trading away their very liberty to shape a congenial environment for themselves, to organize their own behaviour, and to form their own associations. They utilize immense acreages of land but it is not theirs to use freely. They are fantastic travellers but don't seem to have much enjoyment in the going. And, lo, they're doing it in the name of necessity.

All this the new society hardly cares to understand, being quite satisfied to believe that the vast changes are the gift of affluence. Yet, a bit nervously, they are beginning to realize that the new metropolis may also be a fearsome Goliath they call the urban crisis.

THE METROPOLITAN GOLIATH

That Goliath is undoubtedly the striking domestic anomaly of the 1960's, appearing as it has in the midst of unprecedented affluence. An unaccountable growth in crime, an epidemic of protests, and inexplicable outbursts of riots

each reveal more basic problems of urban society than the specific issues seem to warrant. Rising crime rates appear in spite of improved education and increasing opportunities. Economic necessity offers but a meager explanation, as we are far removed from a depression.

The varied protests, for all their specific issues of race, war, and university reform, raise far more penetrating questions than revealed by the fury of words. They seem to be aimed at the whole Establishment itself, for what it *is* to people, not only for what it *does* for them. The Hippies and their descendants—who have virtually professionalized protest—reveal such contempt for the whole social system that they demonstratively reject many of civilization's most dearly held virtues (work, cleanliness, sex mores, and even marriage) and flout its money, suburbs, organizations, and traditional power relationships.

Though the circumstances of Negroes are radically different, the civil rights protests and ghetto riots still go deeper than the specific issues of segregation, prejudice, and deprivation. These they long suffered in the rural South. But when combined with the anonymous, pecuniary, and mechanistic functioning of the city the special deprivations make the accepted struggle for the American Dream seem totally futile.

The Dream is indeed in trouble. Of course the Dream never had an urban chapter, as we have been reminded, and maybe this is part of the trouble. Still, the varied and groping reactions against society should cause everyone to take stock of what has occurred in society, not only in recent decades but over the past century or more. A reappraisal of our social goals, our institutions, our economics and technology, our education and careers, and our cities is an urgent obligation of everyone who considers himself responsible in society. For the planner the city will be the central focus, of course, and hopefully in the broadest context of human purpose.

In reappraising the city, evaluating the *nature of urban space* may be one of the most fruitful avenues of investigation. Urban space and its endless forms, connections, and uses provide limitless possibilities for giving new life to privacy, to association and to interpersonal organization, thereby strengthening the social context and continuity of behaviour of and for the individual. The possibilities include the improvement of functional utility as well, while yet isolating by design (rather than by land) those functions that are dangerous, undesirable, or merely irrelevant to the purposeful activities of man in social intercourse. Each factor, each possibility requires investigation of its potential in explicit personal, social, economic, and cultural terms.

When considering urban space, it is particularly the dynamic third dimension that is most critical to understand—not merely its use, but its use *as a principle of organization.* A realization of the potential of the third dimension, moreover, may well have important implications for some basic planning concepts, especially *land use, population density, zoning,* and *land subdivision.*

Here I can but allude to the enormous practical and theoretical possibilites of developing new approaches to analyzing urban space. By conceiving urban space in systematic and comprehensive terms we may discover that we waste the greater part of our cities, that we regularly destroy, for example, the open-space values we seek, and that the waste and destruction are far more important for our humanity than they are for our economy. (Ironically our economy appears to thrive on systematic urban waste and destruction.) Considering the environmental importance and tidal force of the urban crisis, urban space therefore appears to be an urgent question.

CLUES ABOUT URBAN SPACE

Despite its everyday place in language and the simple concept of its three dimensions, modern urban space remains surprisingly inarticulate. The numerous proposals of recent years to make space more dynamic are suggestive of an enormous potential, a potential comparable to the impact of technology on the form of cities. Indeed, it is the proper spatial articulation of technology which specifically multiplies the possibilities of urban space for human ends.

True, conscious development of urban space has appeared in particular and special instances from before the ancient Greek Acropolis and Roman Forum to our modern Rockefeller Center. Our problem today, however, is to expand urban space concepts into fully comprehensive systems applicable to the whole kinetic metropolis. The problem is now acute because technology permits an unprecedented urban exploitation of vast land areas and then requires a domination of the living environment to overcome the spatial burdens arising from that massive land exploitation.

The specific significance of urban *space* is initially revealed by distinguishing it from *land.* Historically, land has been conceived as the

resource for the development of cities. This is true only in a very limited way. And in the past it did not greatly matter, as long as the scale remained relatively small and before the advent of multistoried structures and mechanically propelled transportation, that is, before conflict of urban activities became pervasive and coordination absolutely necessary.

The importance of the distinction is this. When land is conceived as the resource for cities it is also conceived as the medium shaping urban form. Two-dimensional values of land then dominate the conception of urban development. The discrete parcel or lot and the modular block and street pattern are implicit in this conception, enforcing a barrack-like division of urban space, in vertical as well as horizontal development.

Land in its two dimensions is primarily valuable as a natural resource for growing food and fibre. It must be flat and wholly exposed to the sun. But when cities occupy land, especially as their scale and concentration multiply, what is important is the cubic space that the land affords for the development of a dynamic anatomy and physiology of urban life, not the land as such. Without systematic and comprehensive employment of the qualities of the third dimension, urban space is condemned to mere stacking of nonintegrated piles of activity, block by block. At present the full burden of relating one urban element to another remains almost entirely upon one plane, the street level—the land. Thus, even while we use the third dimension, our system of *organizing* the city remains in the antiquarian second dimension.

For many decades now the attempt to manage the relationships of urban space only at the ground plane has brought about only increasing frustration. Money and time are wasted and everyone, from expert to layman, agrees that the city is overcrowded. This solves nothing. It ends in becoming a contradiction, for the city is by definition a great concentration of human activity. Unless men learn better how to manage great concentrations of activity without congestion they will lose much of what the city is and has to offer. And, as I will show, compact urban development is absolutely necessary in the age of mass urbanism if the open space we so dearly need is to be preserved. We now have a vast array of technologies which can help us accommodate almost any degree of urban concentration and yet avoid the "overcrowding" that now afflicts us. What is missing are the concepts to give us a new understanding of urban possibilities.

But crowding of land (i.e., congestion at the ground level of urban space) is real. Reaction to the congestion has now created a wholesale destruction of urban space near the centre and a massive territorial outbursting of metropolitan growth. Following the tradition of promotional marketing of discrete lots of land on blocks unconnected except by surface streets and boulevards, the public sought (and the real estate promoters strongly encouraged) ever larger parcels ever more distant from the centre or subcentres of a city.

Such a procedure, so pervasive in the development of the American metropolis, works to increase the urban *occupation of rural land,* but does not further the *development of urban space.* The American believes he opts for the best of town and country. When he moves out into a new subdivision his motive is clearly to escape the afflictions of the older city and to enjoy the benefits of more open space in the countryside. (This motive is embedded in planning under the term of "higher standards of urban space.") In reality, he leaves the town to a steady deterioration and destroys the broad open spaces he set out to enjoy. Good money and good intentions follow after bad.

The present metropolitan outbursting could not have happened without the automobile, of course. Its decisiveness in destroying urban space is threefold—motivating, instrumental, and catalytic. First the automobile demands land to travel on (streets, boulevards, freeways), land to park on (at home, office, factory, shopping, school), and land to care for it (to be built, sold, serviced, repaired, resold, junked.)

Second, the motor car then presents its owners with the means to escape the congestion of ground space that results in large part from its own operation. The car is thus instrumental in opening vast new tracts farther and farther out with larger and larger home sites. Those sites are increasingly isolated. They are often too large for personal benefit (that is, burdensome to manage and more than can be properly used); yet anomalously they do not and can never suffice for many activities, for walking, or for a natural setting. Nevertheless, the very low densities that result then kill possibilities for anything like adequate public transport and leave the automobile free to dominate the urban pattern. In one action the automobile appears to provide the means to avoid congestion, when in reality it is setting into motion the increased movement for a more massive congestion.

Third, the circular action is completed when suburban families are *required* by their low-

density living patterns to own a second or even third automobile (a factor already becoming statistically significant). Further demands are created in turn for more freeways, parking, and automotive service facilities. Thus the automobile's catalytic penetration and domination of the urban pattern become evident.

The reality of automotive congestion is that it is far more closely related to dispersion and low density than it is to urban compactness, which affords other alternatives of movement. That is because automobile expansion and urban land consumption powerfully propel and reinforce each other. These seem to appear in cycles. Every score of years since 1900 has seen a new cycle of automotive growth, followed by shifting into new gear for another cycle.

Evidence of a new cycle and a new scale of automobilism is now graphically revealed in California where the State Division of Highways in collaboration with the State Chamber of Commerce has been pressing estimates that "if spending continues at the present level (about one billion dollars annually) until 1975 an additional $23,000,000,000 will be required to meet the needs in the 1975—1985 period.

Twenty-three billion dollars in one state in one decade: that is equal to all expenditures for all streets and highways for all states from 1900 to 1939, or twenty-three times the amount being spent for rapid transit to save the San Francisco Bay Area from a complete transportation breakdown! Assuredly, an increasing part of such funds would be dumped into the State's metropolitan areas.

The astonishing combination of powers which stretch the metropolis to the mushroomed scale of machines is forcing every person into an arbitrary physical dependence upon the automobile. Slowly this process is choking off perhaps the most fundamental liberty of man, to move about according to his own free will. The nondriving half of the population is deprived of normal intercourse with society. The same massive scale that reduces the pedestrian to insignificance and destroys the human scale also diminishes the profound value and social relevance of the environment for the individual: that arising from sight, smell, and touch; that responsive to a greeting, a smile, or a handshake; and the stroller's impulse to stop or change course (for, with the automobile, one's impulse requires an altered plan of action, numerous skilled maneuvers, and a search for a stopping point; and more and more of these actions are forbidden).

The consequences for contemporary "land use" are the weakening of the vital traditional social and economic features of the city: contiguity, centrality, boundary. What we inherit is a massive threesided urban struggle: first, to consume whole regions; second, to span the unprecedented distances involved; and, third, to overcome the consequent traffic congestion. That struggle is failing in the most basic way, for in the mere act of multiplying our per capital consumption of land we are not only destroying openness, we are failing to develop—where the auto is dominant—even a meager degree of urbanity. But the real tragedy is the permanent loss of human sensibilities. And these are the deepest roots of the urban crisis.

(continued on page 31)

POSITIONS AVAILABLE FOR TOWN PLANNERS

SENIOR PLANNER

To manage branch office in Ottawa
Minimum 5 years experience
Bilingual
Membership in T.P.I.C. or equivalent

INTERMEDIATE PLANNERS

Responsible positions in Toronto office and branch office in Southern Ontario
Minimum 3 years experience
Some travel
Membership in T.P.I.C. or equivalent

Municipal Planning Consultants Co. Ltd. was established in 1955 and provides diverse planning consulting services to all levels of Government agencies and private development firms.

Replies will be treated in confidence and should state full personal details, education and experience.

Apply to:

D.J.W. Little,
Municipal Planning Consultants Co. Ltd.,
400 Mount Pleasant Road,
Toronto 295, Ontario,
Canada.

Telephone: (416) 486-7777

June 22, 1971.

COMMUNITY PLANNING ASSOCIATION OF CANADA
ASSOCIATION CANADIENNE D'URBANISME

HALIFAX
NOVA SCOTIA
OCTOBER 3–6

1971
NATIONAL
CONFERENCE

This year's National Planning Conference will focus on **CITIZEN PARTICIPATION AND INVOLVEMENT** in the Urban Environment.
The basic Program has now been established and will include a number of Citizen Involvement Case Studies.

SUNDAY, OCTOBER 3 (EVENING)
Opening ceremonies and keynote address on the Conference theme, by a Canadian personality.

MONDAY, OCTOBER 4
CASE STUDY NO. 1 Community Programming by Cablevision - A New Tool for **Citizen Participation and Community Dialogue**
Currently a live issue across Canada - Delegates will review community projects - Winnipeg, Thunder Bay, Normandin and a number of other examples assessing the value of cablevision techniques, relatively, to the urban and rural scenes.
Already much encouraging interest and support is being received from the Atlantic Region National Film Board and from the N.F.B.'s "Challenge for Change" group in Montreal.

CASE STUDY NO. 2 From 'Encounter' to 'Citizen Involvement'
A review of an 18 month citizenship drama enacted in the Halifax, Dartmouth Metropolitan Area, highlighting features of topical concern, applicable to citizen action groups in many parts of Canada. Many actually involved in 'Encounter' will attend the Conference as resource persons. Live background material includes N.F.B. film on the 'Encounter' and videotapes of the relevant 'Metropolitan Area Planning Committee', 'Citizen Involvement, and, 'Citizens Incorporated' meetings.

TUESDAY, OCTOBER 5
CASE STUDY NO. 3 Involving Young People - Vancouver High School Curriculum Changes & "Design-Ins"
An exciting two-part proposal from C.P.A.C.'s British Columbia Division: "Planning & Urban Affairs" has just been introduced in Vancouver high schools as a subject in the Grade 11 curriculum. Those who prepared the textbooks and spearheaded this advance will be present to outline their successful program of action. A related development is the "design-in" program, employing an imaginative and talented architect-planner to assist students visualize future trends.

WEDNESDAY, OCTOBER 6
CASE STUDY NO. 4 A City Reaches Out to its Citizens - The "Goals for Dallas" Program and a Follow-up by the Municipality of Richmond, B.C.
This, one of many similar projects in the U.S., is perhaps the best documented and most successful citizen endeavour to improve the quality of local government and to enable it to make the fullest use of the community's resources.
A team from the Municipality of Richmond, B.C. will present a program relating the Dallas experience to the Canadian scene.

CONFERENCE SUMMATION & EVALUATION
The Program format envisages that each delegate will spend about 8 hours in his predetermined group to discuss the 4 case studies. The collective value of these discussions, when combined and debated in plenary session, should be of great benefit to all participants. The Program Committee is considering the selective use of videotape to improve intercommunication during the Conference and, to provide a 'video' documentary of certain of the proceedings, the summary and the evaluation, to supplement any written reports and material.

In addition to the basic program many exciting social activities have been planned....ladies' program.... receptions.... banquet.... a lobster "do"....tours.....

PARTICIPATION INFORMATION

INVOLVEMENT COMMUNICATION

EXPERIENCES OF PARTICIPATION CASE STUDIES:

CABLEVISION
and
COMMUNITY DIALOGUE
NATIONAL FILM BOARD
CURRENT CANADIAN
EXAMPLES.

'ENCOUNTER'
to
'CITIZEN INVOLVEMENT'
HALIFAX-DARTMOUTH
METRO AREA.

YOUNG PEOPLE and
THEIR ENVIRONMENT
CITY OF VANCOUVER
HIGH SCHOOL PROGRAMS
''DESIGN-IN''

CITIZEN PARTICIPATION
PROGRAMS
''GOALS FOR DALLAS'' TEXAS
RICHMOND, B.C.

TECHNIQUES

EXPERIENCES

SUMMATION & EVALUATION

LOBSTER PARTY
ICE-BREAKER GATHERING
ENTERTAINMENT
BANQUET
RECEPTIONS
LADIES PROGRAM
TOURS & VISITS

REGISTRATION

DELEGATE - Member CPAC	$35.00
DELEGATE - Non-Member	$42.50
SPOUSE	$15.00
SESSIONS ONLY	$10.00

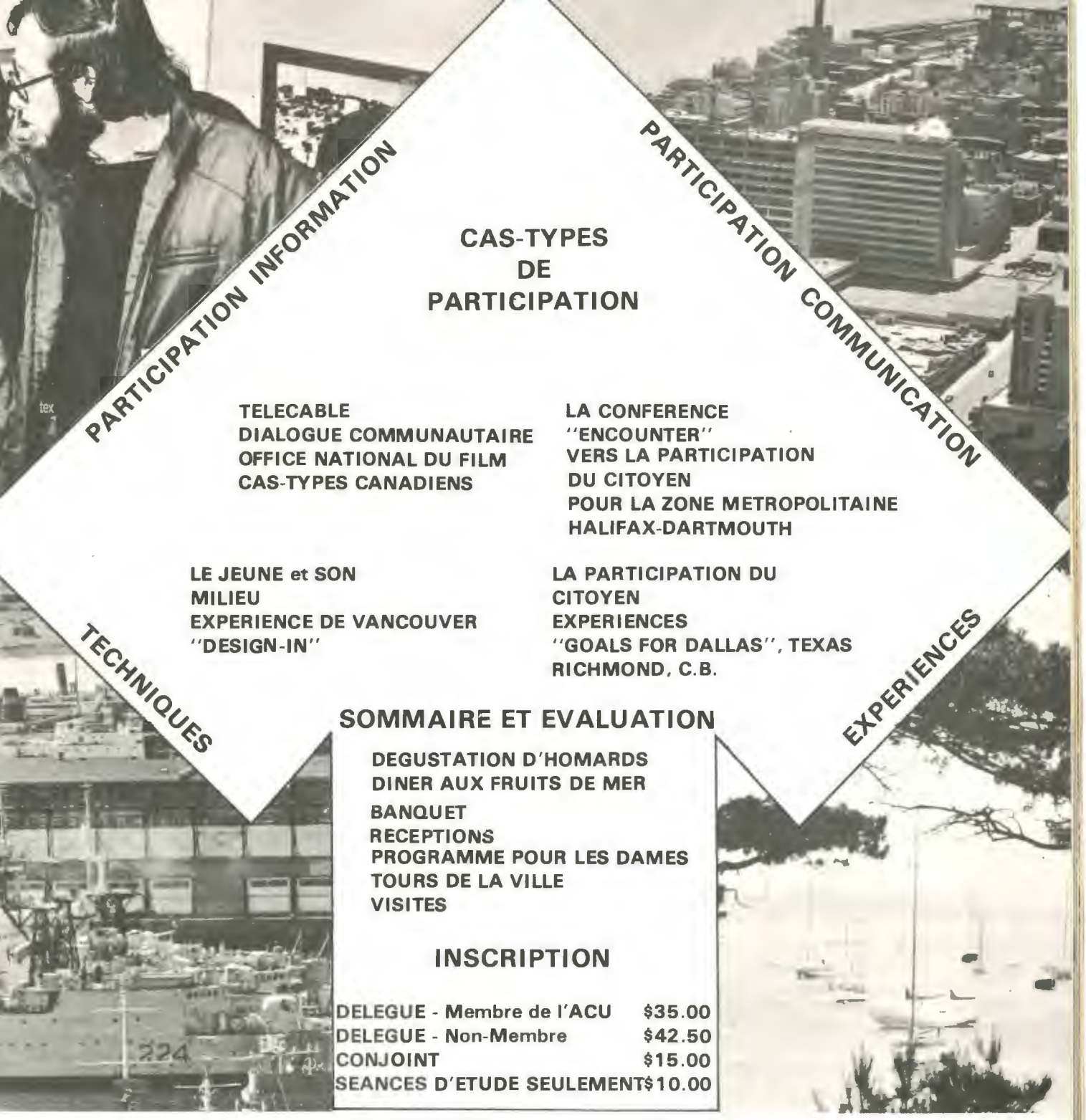
2

1971 NATIONAL CONFERENCE

HALIFAX, N.S.
OCTOBER 3-6

NOVA SCOTIA

COMMUNITY PLANNING ASSOCIATION OF CANADA



PARTICIPATION INFORMATION

PARTICIPATION COMMUNICATION

TECHNIQUES

EXPERIENCES

CAS-TYPES DE PARTICIPATION

TELECABLE
DIALOGUE COMMUNAUTAIRE
OFFICE NATIONAL DU FILM
CAS-TYPES CANADIENS

LA CONFERENCE
''ENCOUNTER''
VERS LA PARTICIPATION
DU CITOYEN
POUR LA ZONE METROPOLITAINE
HALIFAX-DARTMOUTH

LE JEUNE et SON
MILIEU
EXPERIENCE DE VANCOUVER
''DESIGN-IN''

LA PARTICIPATION DU
CITOYEN
EXPERIENCES
''GOALS FOR DALLAS'', TEXAS
RICHMOND, C.B.

SOMMAIRE ET EVALUATION

DEGUSTATION D'HOMARDS
DINER AUX FRUITS DE MER
BANQUET
RECEPTIONS
PROGRAMME POUR LES DAMES
TOURS DE LA VILLE
VISITES

INSCRIPTION

DELEGUE - Membre de l'ACU	$35.00
DELEGUE - Non-Membre	$42.50
CONJOINT	$15.00
SEANCES D'ETUDE SEULEMENT	$10.00

CONFERENCE NATIONALE 1971

HALIFAX, N.E., 3-6 OCTOBRE

ASSOCIATION CANADIENNE D'URBANISME

NOUVELLE ECOSSE

COMMUNITY PLANNING ASSOCIATION OF CANADA

ASSOCIATION CANADIENNE D'URBANISME

HALIFAX
NOUVELLE ECOSSE
3-6 OCTOBRE

CONFERENCE
NATIONALE
1971

La Conférence Annuelle d'Urbanisme 1971 portera une attention spéciale à la **PARTICIPATION DU CITOYEN** dans le milieu urbain.
Le programme préliminaire a maintenant été complété et incluera l'étude d'une série de cas-types, où la participation du citoyen a été assurée.

DIMANCHE, 3 OCTOBRE (SOIREE)
Cérémonies d'ouverture et Discours d'ouverture sur le Thème de la Conférence par une personnalité canadienne.

LUNDI, 4 OCTOBRE
CAS-TYPE NO 1: L'évolution de programmes communautaires par Télécâble - Une technique nouvelle pour assurer la participation du citoyen et le dialogue.
C'est là une toute nouvelle expérience au Canada. Les délégués pourront étudier diverses expériences: Winnipeg, Thunder Bay, Normandin, ainsi qu'un nombre d'autres expériences afin d'évaluer la valeur de l'utilisation du Télécâble pour le développement des milieux urbains et ruraux.

CAS-TYPE NO 2: De la Conférence "Encounter" vers la Participation du Citoyen
Etude d'une expérience qui a pris place durant les derniers 18 mois dans la région d'Halifax-Dartmouth, mettant en lumière certains faits qui peuvent s'appliquer partout à travers le Canada. Plusieurs des personnes qui ont pris part à cette expérience assisteront à la Conférence. Des films préparés par l'Office National du Film sur ces événements et sur plusieurs rencontres qui ont eu lieu durant cette expérience pourront être visionnés.

MARDI, 5 OCTOBRE
CAS-TYPE NO 3: La participation des jeunes - L'expérience des écoles secondaires de Vancouver et les "Design-Ins".
Une proposition intéressante de la Division de la Colombie-Britannique de l'A.C.U "L'Urbanisme et les Affaires Urbaines" vient d'être acceptée par les écoles secondaires de Vancouver pour être incluse dans le curriculum des élèves de 11ième année. Les auteurs des textes de base qui seront utilisés dans les écoles assisteront à la Conférence pour expliquer leurs méthodes de travail. Une expérience découlant de la première est l'organisation de "Design-Ins", avec la collaboration d'un talentueux et imaginatif architecte-urbaniste afin d'aider les étudiants à visualiser notre milieu de demain.

MERCREDI, 6 OCTOBRE
CAS-TYPE NO 4: L'expérience d'une ville qui a réussi à faire participer ses citoyens: "The Goals for Dallas", programme original qui a été repris par la ville de Richmond, en Colombie-Britannique
Cette expérience, l'une de plusieurs actuellement tentées aux Etats-Unis, est probablement la mieux documentée et celle qui a connu le plus de succès en amenant le citoyen à améliorer la qualité de l'administration locale et à rendre possible l'utilisation maximum des ressources locales.
Une équipe de la ville de Richmond présentera aux délégués un programme adaptant l'expérience de Dallas au milieu canadien.

SOMMAIRE ET EVALUATION DE LA CONFERENCE
Le format adopté pour le déroulement de la Conférence prévoit que chaque délégué pourra se pencher pour un total de 8 heures sur les 4 cas-types prévus aux programmes, et ce dans des ateliers d'études regroupant un nombre restreint de délégués. La valeur collective de ses discussions, lors des sessions plénières, devrait s'avérer très enrichissante. Le Comité d'Organisation de la Conférence étudie aussi la possibilité d'utiliser des vidéotapes afin de faciliter les communications d'un atelier d'études à un autre. Cette méthode permettra aussi de fournir un documentaire enrégistré sur certaines des sessions, sur le sommaire et l'évaluation de la Conférence, afin de suppléer à certains rapports écrits.

En plus du programme principal, des activités sociales sont prévues: programme pour les dames. . . . réceptions. . . .banquet. . . .une dégustation de homards. . . .des visites. . . .

la ville postmachiniste

par Michel Lincourt

De La Revue **Québec Science**
Volume 9, Numéro 2, 1970.

Les grandes villes nord-américaines, reflet de la civilisation machiniste du siècle dernier, ne sont plus du tout adaptées aux mentalités de l'époque électronique.

L'aménagement urbain devrait, pour répondre aux nouvelles aspirations de l'homme, subir de très profondes réformes. Lesquelles? Un spécialiste donne son avis.

Nous connaissons tous notre histoire: la conquête de 1760, suivie de l'exode des cadres vers la France et le long hibernage autour du clocher, du berceau et de l'agriculture. La Révolution industrielle qui, il y a un siècle, métamorphosa l'Europe et poussa les Etats-Unis au faîte de la civilisation technologique, effleura à peine le Québec. Cependant, en dépit de cet isolement, la poussée de l'urbanisation s'y fit sentir aussi fortement qu'ailleurs. Montréal devint donc une métropole et, comme toutes les autres grandes villes d'Amérique du Nord, elle illustre aujourd'hui d'une façon spectaculaire le machinisme.

De ce symbole, l'automobile est le principe moteur.

Comme l'automobile, la ville tire la rationalité de son développement d'un schéma linéaire de pensée et l'économie urbaine ressemble à la chaîne de montage. Comme elle, la ville atteint la démesure du gigantisme. Comme elle enfin, la ville étouffera sous son poids car le dinausore nous a démontré qu'un organisme rongé par l'obsolescence, s'accroît hors de proportion avant de mourir.

Cette ville, cependant, ne s'est pas faite toute seule. Ce sont les hommes qui l'ont construite à l'image de leur culture machiniste.

Citadelles de réactionnaires O
Le machinisme peut se définir par quatre grandes idées. D'abord, l'orientation pratiquement exclusive de l'énergie humaine vers la production. Toute action humaine, dans cette optique, n'a de valeur que si elle s'affectue en fonction d'un objectif externe et autonome. Ensuite, le productivisme donne naissance à la spécialisation, et, dans le même ordre d'idées, à la centralisation. Une ville de spécialistes ne peut être qu'un agglomérat de secteurs spécialisés, chacun se surcentralisant sur le seul point d'échange possible, le centreville. En troisième lieu, le machinisme sous-entend la libre entreprise, le laissez-faire et le capitalisme désordonné. Si bien qu'à New York par exemple, les diverses lignes du métro furent longtemps des entreprises commerciales privées se livrant une lutte concurrentielle acharnée. Finalement, pour ne pas sombrer dans l'anarchie totale, le machinisme se donna des institutions stables qui devinrent rapidement des citadelles de réactionnaires. Et il s'en glorifia.

Pendant un certain temps, la ville, qui est le reflet de cette civilisation, répondit aux aspirations des gens et fonctionna donc relativement bien. Or, maintenant, elle ne fonctionne plus. Pourquoi? Parce qu'elle continue à offrir son infrastructure machiniste à une population à culture postmachiniste.

L'homme actuel rejette les valeurs anciennes. La participation remplace la production, la généralisation succède à la spécialisation, la planification vient contrecarrer le laissez-faire et la contestation des institutions s'installe dans les moeurs. La civilisation postmachiniste, déjà qualifiée d'électronique, a courtcircuité les chaînes de décisions. La confrontation n'est plus bilatérale mais multilatérale; la contestation n'est plus le rôle du représentant du peuple mais celui du peuple tout entier. L'ordinateur et la télévision permettent la simultanéité que l'homme actuel désire.

Que serait donc une ville apte à satisfaire les désirs de l'homme à culture postmachiniste? Elle devrait:

a) permettre une interaction synergétique des activités,
b) distribuer les citoyens dans une organisation spatiale et temporale à haute densité participationnelle,
c) faire éclater les centres traditionnels,

d) tendre, tel l'ordinateur, vers la miniaturisation de ses infrastructures.

La ville, marché d'idées O La ville, par définition, est un marché d'idées. La possibilité d'instaurer des échanges constitue la raison d'être de toute concentration humaine; par conséquent, toute infrastructure urbaine doit catalyser de tels échanges. La ville machiniste ne permet que les échanges linéaires et spécialisés: dans le parc industriel, les échanges sont uniquement du type économique tandis que sur le campus, ils ne sont que du type éducationnel. Or l'homme électronique transcende la liaison unique avec son environnement. Il veut l'immersion totale dans l'information: il demande la simultanéité des perceptions multiples. Il désire, à tout moment, avoir le choix, non pas entre deux options, mais entre une infinité d'options.

Ce qu'il désire surtout, c'est un style de vie tellement opposé à l'infrastructure machiniste que ses exigences semblent contradictoires. A l'endroit où il vit, il veut trouver l'action, le bruit, l'excitation, la foule et avoir, en même temps, la possibilité de se couper du reste du monde en deux minutes. Il veut vivre au coeur de la ville sans perdre le contact avec la nature. Il veut évoluer en climats protégés et voir passer les saisons. Il veut l'action sans le stress et la proximité sans la promiscuité. En somme, il veut une existence conforme à sa pensée, c'est-à-dire de vision globale et de synthèse.

La ville électronique permet cette vie car elle distribue les activités selon des lignes de force culturelles. Chacune de ses activités se situe en état de synergie par rapport à ses voisines et atteint ainsi la plus grande efficacité possible. L'homme électronique demande une ville aussi efficace qu'un ordinateur.

De la chambre vers la rue O Pour assurer l'interaction synergétique des activités humaines, la ville électronique rehausse considérablement la densité moyenne. A l'heure actuelle, la densité du domaine total bâti des villes nord-américaines se situe autour de quinze personnes à l'acre. Ce taux doit être multiplié, au moins, par vingt.

Le principal argument avancé contre cette augmentation réside dans l'ignorance de la limite supérieure de densité. Il faut certes augmenter la densité, mais jusqu'à quel taux? La réponse ne peut être fournie en chiffres absolus mais plutôt sous la forme d'un principe relatif. On peut accroître la densité tant que la possibilité de contrôler les relations entre le privé et le public subsiste. Toute relation, qu'elle soit physique, visuelle, olfactive, auditive ou autre, doit se faire du plus privé vers le plus public. Elle ne peut se faire dans le sens opposé qu'avec la permission du privé. Par exemple, la relation visuelle entre une chambre à coucher (privé) et la rue où passent les piétons (public) doit toujours se faire de la chambre vers la rue, de telle sorte que la personne puisse voir la rue de sa chambre. La vision en sens inverse se fera uniquement si l'occupant de la chambre l'autorise. Si la densité augmente au point que le contrôle de ces relations soit impossible, cela signifie qu'elle est devenue trop forte.

De là découle la définition de la notion de privé: c'est la qualité qui est fonction du degré de contrôle de l'homme sur son environnement.

Ainsi, la ville électronique doit surmonter la contradiction entre la densité maximum et le privé le plus absolu. C'est un équilibre digne de la science humaniste que l'homme électronique exige de sa ville.

Affinités culturelles O Dans un environnement de pôles d'attraction, la centralisation à outrance équivaut à une décentralisation totale et vice versa. Si, par exemple, le Québec tout entier se regroupe à Montréal, la métropole deviendra tellement grande qu'elle couvrira une surface sur laquelle tout sera décentralisé. De même, si dans cette mégalopole toutes les activités se centralisent dans le centre-ville, ce dernier deviendra la ville elle-même et disparaîtra ainsi comme entité distincte.

La ville postmachiniste connaîtra cet éclatement des centres. Ceci veut dire qu'en prenant à chaque point de la ville un échantillonnage des composantes d'activités qui s'y trouvent, nous pourrons obtenir une composition globale de la ville. La densité spatiale, la densité temporale et la densité de construction seront plus ou moins uniformes à travers la ville. Par contre, à l'intérieur de cette homogénéité, il y aura l'hétérogénéité la plus complète des composantes d'activités. Il n'y aura jamais, dans la ville postmachiniste, deux endroits identiques, ni même deux endroits relativement semblables, comme c'est le cas dans la ville actuelle. La similitude provient de la spécialisation des lieux. Un centre d'achat, parce qu'il ne contient que du commerce, ressemble inévitablement à un autre centre d'achat. Telle banlieue ressemble toujours à telle autre banlieue. Si, par contre, la ville contient partout les élements représentatifs de toutes les activités urbaines, elle aura la richesse du milieu indispensable à la variété.

Donc, la ville atteindra l'hétérogénéité dans l'homogénéité par l'assimilation de toute la ville par le centre-ville.

En plus, tous les autres centres traditionnels tels que les centres d'achat, les centres financiers, les centres universitaires (les campus), les centres culturels, les centres de spectacles, les parcs industriels, etc., seront démantelés et répartis selon leurs affinités culturelles et non pas en fonction de normes administratives ou des faiblesses de l'infrastructure.

En somme, la ville postmachiniste sera une ville non spécialisée. L'homme électronique demande la généralité afin de faire les synthèses.

Une vision monstrueuse O La ville postmachiniste renverse les tendances actuelles. Aujourd'hui la croissance urbaine tend vers le gigantisme. New York, Tokyo et Londres couvrent chacune une superficie de 6400 kilomètres carrés. Non seulement la ville atteint une taille qui semble échapper à l'entendement, mais encore elle se développe dans un désordre de plus en plus chaotique. La ville grossit dans le marasme et donne l'impression

(voir page 37)

TRANSPORTATION FOR METROPOLITAN TORONTO

By
Henry R. Cooke, P.Eng.,
Assistant Vice-President,
Frederic R. Harris of Canada Ltd.,
Toronto

The question of transportation is crucial in the current controversy as to whether Metropolitan Toronto should be allowed to expand or remain restricted to its present boundary. What strains will an expanding urban area place on the existing transportation system? Can transportation needs be more effectively met by dispersal of the expanding population to sub-regional centres? To make this assessment, it is necessary to review existing transportation modes and compare their efficiencies for the two situations. This survey can then be expanded to assess new forms of transportation that would ease traffic congestion and to measures to reduce traffic conflicts and travel times within the city.

THE PROVINCIAL REGIONAL PLAN

In May 1970 the Government of Ontario made public its draft plan for development of the Toronto region. (Fig.1) It envisages a linear urban development along the Lakeshore from Bowmanville to Hamilton with regional centres (population over 250,000) located at Hamilton, Port Credit and Oshawa and sub-regional nodes (population 50,000

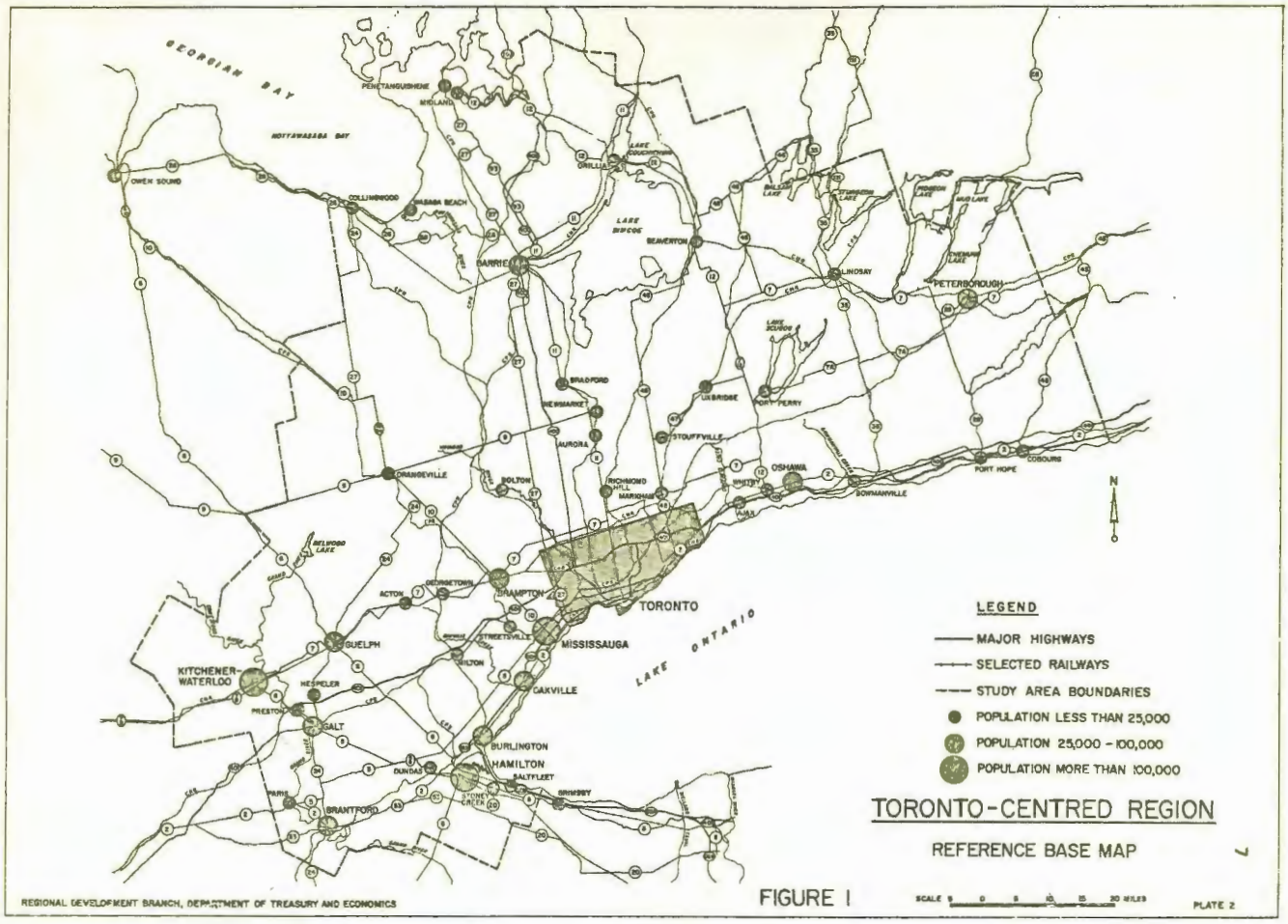


FIGURE 1

to 250,000) at Burlington, Oakville and Ajax. These centres are presently the foci for growth. The Regional plan accepts this fact but emphasizes the need to preserve the space between these centres as open space rather than encourage low density ribbon development. An upper tier of sub-centres is planned paralleling the lakeshore development and separated from it by a broad buffer Parkway belt, which will incorporate an expressway, rapid transit and public utility lines.

The decision to locate heavy concentrations of population adjacent to the Lakeshore was influenced by the economics of building short sewer and water lines to Lake Ontario. The inland lakes such as Lake Simcoe have a limited capacity for absorbing sewage and supplying water. The plan also encourages urban growth at Richmond Hill, Aurora, Newmarket, Barrie and Midland which lie on a direct northerly route from Toronto. It is expected that growth at these centres will encourage the integration of Northern Ontario with the developed south west. Of the anticipated 5.7 million population for the lake-oriented urban area by the year 2000, 3.1 million will be absorbed in Metropolitan Toronto; 1,850,000 west of Toronto and 750,000 east of Toronto. The plan also recommends the development of a regional centre at Port Hope and Cobourg, about 60 miles east of Toronto on Lake Ontario, where there exists unused potential for development. It is hoped that this centre will act as a counter magnet to the pull from Toronto and assist in the development of Eastern Ontario.

There are several excellent features in the plan. The restrictions to growth toward the north will make it easier to gain access to the hinterland from the lakeshore centres. The broad Parkway belt, besides providing a positive barrier to northward growth, comprises a buffer zone between the noise and pollution of corridor traffic and urban residents. The consolidation of urban growth at regional and sub-regional centres with intervening green space is an attempt to reverse the current unsatisfactory trend of unstructured urban sprawl along the Lakeshore. The restriction of growth in Metropolitan Toronto and the proposed development of regional centres at Hamilton, Port Credit, Oshawa and Port Hope-Cobourg will more evenly distribute traffic, which is at present Toronto oriented, along the main transportation corridor.

The concept of decentralization should help relieve

the pressure on land for housing, public utilities, parklands and street space - including freeways, and reduce the concentration of noise and pollution within Metropolitan Toronto.

In London, England, decentralization has been supported by official policy. The Location of Offices Bureau was established in 1963 to encourage firms to decentralize. This agency claims they have been successful in assisting the move of 224 firms with 17,000 workers. In 1964 the Board of Trade introduced a system of Office Development Permits which became a prerequisite to normal planning permission and which was designed to check the growth of office employment in London. Central London has an employment level of more than a million and a quarter. Less than 10% of this figure live there. This disproportion creates a serious imbalance in directional travel; 1.2 million trips one way against 23,000 in the reverse direction. The drawback with the plan is that it does not go far enough in decentralizing.

Midland, in the depressed Georgian Bay area, could be developed more intensely to function as a regional centre with a population in excess of 250,000, surrounded by a cluster of sub-regional centres at existing developments viz Orillia, Barrie, Collingwood. Similarly a satellite cluster can be developed around the regional centre of Port Hope-Cobourg. The diversion of population to these areas from the Hamilton-Toronto-Oshawa corridor will relieve the strains on the east/west Lakeshore transportation routes which are required to carry not only the traffic generated by the intensely developed urban corridor, but also the through traffic between the Great Lakes megalopolis (Cleveland, Chicago, Detroit, Windsor) and Montreal.

Within the Metropolitan area it is also desirable to correct the existing imbalance between residence and place of work. The Central Business District of Toronto is located adjacent to the north shore of Lake Ontario. The drawback with this position is that there are no access routes to the centre from the south. The proposal to create a Harbour City by filling in portions of the lake south of the CBD will correct this deficiency. (Fig.2) The proposal would locate 60,000 people in an attractive lakefront environment close to the offices, stores and entertainment centres in the CBD. It's high density and position outside the heavily-travelled corridors would make it easy to service with rapid transit.

The population of Metropolitan Toronto is currently 1,975,000 (1969 census). The population is spread out over 241 square miles and the area sub-divided into six municipal units, the City of Toronto, the Boroughs of North York, East York, Scarborough, York and Etobicoke. The transportation problem is aggravated by the fact that though the Boroughs of North York, Scarborough and Etobicoke each have sufficient people to develop as self-contained units, they do not function as such. Travel during the peak hours is heavily oriented towards the central city. Ideally, these boroughs should be developed as subcentres to achieve a better balance between place of residence and place of work. Being furthest removed from Toronto, large areas of these boroughs are outside the limits that can be conveniently serviced by rapid transit.

Toronto will still retain certain specialized functions which require the support of a metropolitan population. As such, it will remain the locus of the head offices of financial institutions, real estate, insurance, communications and the centre of cultural activities, which will ensure its viability as a thriving, dynamic city.

EXISTING MODES - INTRA CITY

SUBWAYS:

The Toronto Transit Commission has planned a network of subways to service the Metropolitan area. (Fig.2) Their construction involves heavy capital expenditures, currently about $20,000,000 a mile. To justify these expenditures and cover operating costs these services can only be provided in densely populated corridors. Two recent studies have concluded that when single direction passenger volumes in a travel corridor exceed 12,000 persons in the peak hour, or when more than 20% of the rapid transit route mileage requires exclusive rights-of-way in subways, rail systems have a cost advantage over bus systems that utilize freeways and special bus roadways. (1) The subway provides an extremely efficient service during rush hours for riders with trip origins and destinations within easy walking distance of subway stations. Passengers with trip origins and/or destinations outside these limits depend on feeder bus, streetcar, commuter train or private automobile to be able to use the system. The attractiveness and efficiency of the system deteriorate when these elements are added to the trip because of time losses, in walking, at transfer points, in the feeder system and due to the inconvenience of transfers.

The subway system has no passing tracks and with the stations spaced at close intervals, the average speed for all trains varies between 17 and 23 m.p.h. depending on station spacing. As the lines are extended further out form the core, travel times become progressively more unattractive.

There is also a limit to the capacity of the lines, particularly the downtown sections. The Yonge Street Subway, opened to Eglinton Avenue, carrying 35,166 passengers per hour per track, (1965 figure) during peak hours on the downtown section, is taxed to near capacity. The Transit Commission proposes to reduce headways from 128 secs to 120 secs to accommodate the additional passengers expected when the northerly extension from Eglinton Avenue to Finch Avenue is opened in 1973. A capacity constraint will then limit this northerly extension. The Bloor Street subway, built after the original Yonge Subway, was extended east and west beyond the limit of the high density inner city. This line, during peak hours, is presently carrying 18,000 passengers (1970) per hour per track on the downtown sections. The stations have become foci for high density development and it will not be long

before this line, too, is operating at capacity. There is a need to establish a cut off point in terms of distance, travel time, or passenger volumes beyond which it is undesirable to extend the subway system outward from the core. Beyond this cordon, a transportation mode, using higher speeds with widely-spaced stops is needed to reduce travel time and relieve congestion. In summary, this system is ill suited to serve an expanded Metropolitan area.

COMMUTER TRAINS - GO TRANSIT

A study of the region surrounding Metropolitan Toronto indicates a network of railway rights of way radiating from the core of the city which are ideally suited for utilization as transportation corridors. This would involve no change in the use of the land and as the railways have existed for years as barriers between adjacent land uses, it involves no disruption of community connections. No homes would need to be demolished and no families displaced. There is only one party - the Railway - to deal with in negotiation for use of the land, rather than a multitude of property owners.

Since 1967, the Government of Ontario has operated a commuter service - GO (Government of Ontario) Transit - over partially redundant trackage owned by the Canadian National Railways. These commuter trains operating along the shores of Lake Ontario were designed for and primarily serve to transport people from the dormitory suburbs to offices in downtown Toronto.

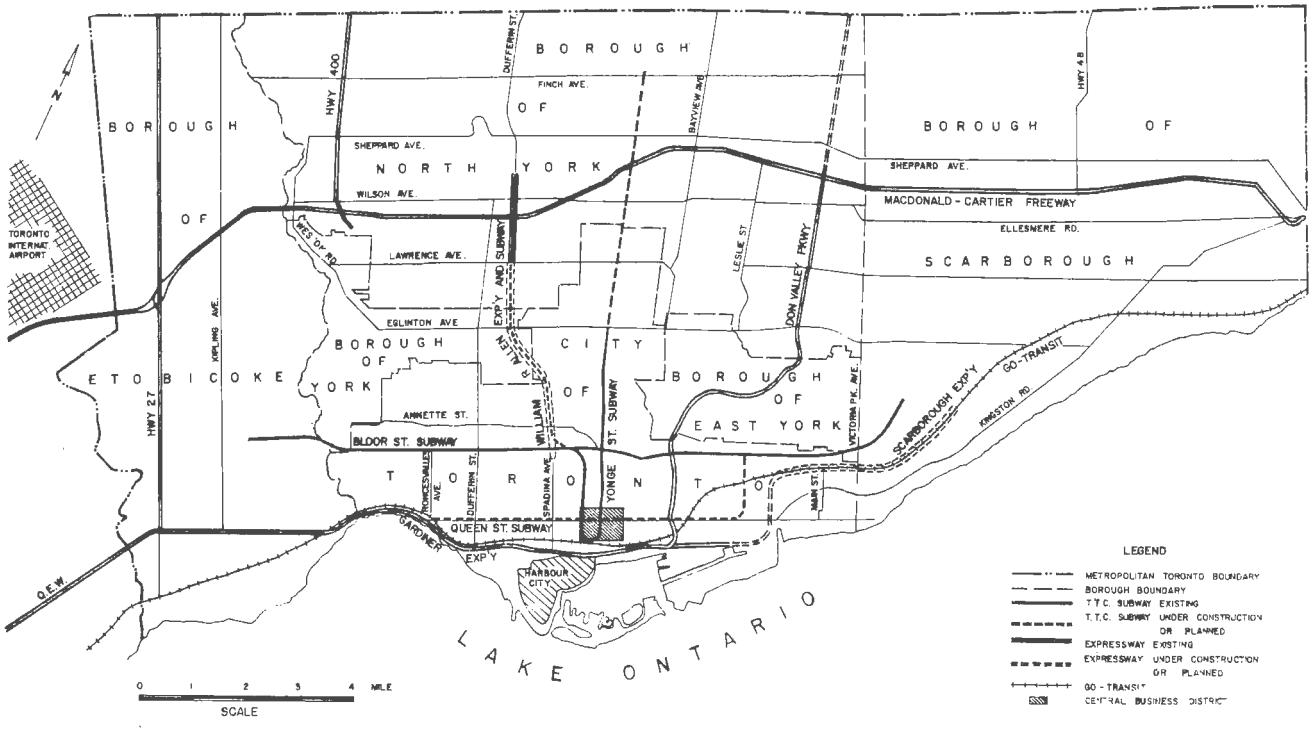
The GO stations are spaced at wider intervals than on the subway, allowing the trains to operate at higher average speeds. (34 M.P.H.) The longer distances are partly compensated by higher speeds, so that longer journeys can be made in the same travel time. Travel costs, however, increase with distance and the number of passengers who can afford the twice daily expense from the remote parts of the system, is limited to the relatively affluent segments of society. The fare from Oakville or Pickering to Union Station is currently 85¢.

Within the Metropolitan limits, the commuter trains provide a service similar to the subway, faster in terms of travel time and comparable in cost. The service, however, is not as frequent, with 20 min. headways during peak hours, compared to the 2 minute headway on the subway. Two thirds of the patronage is derived from persons who live within walking distance from a suburban GO station and who work within a short walk from Union Station. (2). Other patrons using the rapid transit feeder systems to complete the trip to their destination, must pay another fare of 25 cents and suffer the inconvenience and delay of transferring to another mode.

At the trip origin, conditions are better. Free parking is provided at the outer stations and there is also the alternative Kiss-n-ride arrangement, in which the commuter is dropped off at the station by a member of his family.

In 1968 the system had a net operating deficit of

METROPOLITAN TORONTO EXPRESSWAY AND SUBWAY ROUTES



$2,599,000. an average of 56¢ per trip. A study of the other railway lines radiating from the centre for possible use by GO transit, revealed that every one of them would require operating subsidies over and above the initial capital investment for equipment, stations and signal installation. In the light of their experience with the Lakeshore line and with the knowledge that all extensions will require further subsidies, the Government of Ontario, despite public pressure, is reluctant to expand the GO service. It is presently studying alternatives using express buses in lieu of trains.

What is the future for the Lakeshore GO transit? Commuter patronage will increase from the near-in stations as high-rise, residential developments intensify around these stations.This is now occurring at the Port Credit and Eglinton GO stations, (not to be confused with the Eglinton Subway Station Ed.) where the 50¢ one way fare, to downtown compares with the two-zone fares on the rapid transit system. From the more distant stations, such as Pickering and Oakville, GO will retain the patronage of the affluent commuter, working within walking distance of the downtown terminal, but this potential is limited. The service is more suited for the occasional trip to Toronto for specialized shopping, entertainment and business activity by people employed locally in the outer areas.

Average week day trips increased from 15,600 in 1968 to 16,258 in 1969, but the Ontario Government estimates that at current rates, 25,000 daily trips are required to cover operating costs alone.

The preceding analysis suggests a dual function for the Lakeshore GO transit. Between the Eglinton and Port Credit stations it should function primarily as a commuter service supplementing the subway with close station spacing and small headways. Beyond these limits a less frequent service, with wide station spacing and high line speeds, will serve patrons making the occasional recreational, shopping and business trip to the city centre. As the service is in competition with the automobile, to succeed it must offer a comparable alternative in time, comfort and cost. The keys to the success of the Lindenwold rapid transit system connecting the suburb of Lindenwold, New Jersey to downtown Philadelphia, are ample free parking facilities at the outstations, the drastic reduction of labour costs by the use of electronically-controlled high speed, comfortable trains, automatic ticket dispensers and ticket-operated turnstiles. The Delaware River Port Authority expects to earn a $15,000.00 operating profit in 1970.

BUSES

The Toronto Transit Commission operated 1155 buses over 500 miles of streets in Metropolitan Toronto (1969). A large proportion of these buses are used to provide a feeder system for the subway - 16 routes radiating from the subway terminus at Eglinton alone. The remainder criss-cross the Metropolitan area providing a reasonable public transit system for the entire area.

The advantage of bus transit is its flexibility in routeing and the negligible capital investment required to initiate the service. There are, however, several disadvantages with the system as presently operated. Buses do not have an exclusive right of way; they are delayed by traffic lights and must stop many times enroute to load and unload passengers. Trips requiring transfers between buses or to the subway, create more delays and add to the inconvenience. A modified form of bus service which would eliminate or minimize the present disadvantages is discussed later in this paper.

EXPRESSWAYS

The existing and currently approved network of expressways in Metropolitan Toronto is indicated in (Fig.2). The effect of freeway construction is to encourage development far beyond the suburban termini of transit routes. The reason for this expansion is that the public in selecting a location either for residence or business are influenced more by travel time than travel distance. Traffic generated by this development congests the expressways at their origin during rush hours, making it difficult for traffic to enter the system via the interchanges downstream from the origin. What then starts out as a boon to motorists living downstream from a suburban terminus soon deteriorates into a congested artery. This situation occurs on the Don Valley Parkway, where peak traffic counts at a downtown checkpoint registered an increase from 81,700 vehicles daily in 1967 to 107,400 vehicles in 1969. The only solution to stabilizing traffic volumes and retaining the effectiveness of the expressway system is to place restrictions on further urban sprawl.

With our rising affluence, vehicle ownership and use will increase, and the problem of coping with the ebb and flow of the summer weekend exodus, is steadily growing. Sunday evenings in summer, long lines of traffic are stalled for miles outside the urban limits and as these limits expand, the congestion will increase, providing another reason for containing the urban periphery.

SOLUTIONS:

The problem of traffic congestion must be attacked on two fronts. There is the immediate need which must use the tools now at our disposal. This can be described as gradualism. Funds for improvements of this kind are financed by the U.S. Federal Government in the 'TOPICS' programme. Currently, there is a need to evaluate new technology. The latter implies innovations so substantial that they are no longer merely incremental changes in and additions to existing systems.

GRADUALISM:

Some advances of this kind have already been put into effect in Toronto. An example is the computer control of traffic signals. The beneficial effect of this innovation can best be gauged by the dislocation and delays that occur whenever the computer breaks down. Very little experimentation has been done with one-way streets and reversible

lanes, although these are now under review. Exclusive bus lanes or traffic controls giving priority to buses have been discussed, but have yet to be put into effect and more consideration needs to be given to use of the freeway system by express buses. A successful precedent for a service of this type is the introduction in 1964, of the Mayfair Freeway Flyers, an express bus service from the Mayfair Shopping Centre to Milwaukee's CBD. The buses travel 9 miles by Freeway to the CBD in 22 minutes. Fares were set at 30 cents each way. By October 1966 the company was operating ten buses each morning and afternoon. The number of passengers per day had risen from approximately 250 to 900 and the company reported a $12.00 profit per operating hour. Among the passengers who commuted prior to the inauguration of the Flyers, 43% and 10% respectively in their own cars or pool cars (3).

It is significant that 53% of the passengers were former automobile users rather than users of alternative public transportation modes. As in Milwaukee, shopping centres are ideal terminals for express bus services. The large parking areas usually available at these locations, permit passengers to be conveniently dropped off or picked up by automobile at these points. Areas of the centres' parking spaces largely unused by day, during the week, can be used as a parking lot and the addition of attractive air-conditioned shelters with newstands and a coffee bar would further enhance the attractiveness of such a service.

Metered control of access ramps to the expressways during peak hours, to restrict automobiles entering when traffic volumes reach congestion levels, would ensure higher speeds and larger volumes on the expressways. This restriction should not apply to express buses as it is important that the relative convenience of bus travel versus automobile be weighted in favour of the bus.

One of the effects of the predominant use of the automobile for the journey to work has been the dispersal of offices and factories to the suburbs. This is a desirable trend inasmuch as it counterbalances the heavy movement of traffic towards the CBD. However, the streets around these factory-office complexes, in many suburbs of Metropolitan Toronto, are as congested as the downtown sections, because the percentage of workers using automobiles for the journey to work is far higher though population densities are considerably lower. This occurs because of the inadequacy of the public transit system to service dispersed origins and destinations. It is not too difficult to devise a group transportation system to service these centres during the peak hours as the potential passengers have a common destination, the problem is their collection from scattered residential locations. As the service would be competing with the automobile it is essential that it eliminate the drawbacks of public transit. NCHRP Report 57 of the Highway Research Board on modal choice derived from data assembled from household interviews, listed convenience and travel time as the general factors in mode selection.

To eliminate the principal drawbacks of public transit, the number of stops during the collection and distribution phases should be limited and every passenger should be provided with a seat. The economics of operation dictate large passenger-carrying capacity, whereas the convenience of travel, viz fast travel time with few stops, favour small vehicles. A compromise is a 10—12 seater mini bus.

Operating costs can be cut if the bus is driven by one of the passengers. This scheme is a variation of the federally authorized interstate car pool operated by Monarch Associates. The firm owns and operates 20 vehicles that carry about 140 commuters from Rockland County, New York and Bergen County, New Jersey to New York City. The firm provides vehicles and arranges pools on the basis of origins, destinations and working hours. Operating and maintenance costs, parking charges, insurance premiums and tolls are paid by the company, and as one member of each pool drives, there are no explicit wage costs. The travel time and the charges are less than those of the transit companies. To date, the company has had more requests than it has been able to accommodate.

There are several benefits to be derived from a scheme of this type - factories and offices require smaller parking lots, the municipality and other commuters derive benefits from reduced congestion, and the commonweal profits by reduced pollution.

NEW TECHNOLOGY

MINI CARS

There is a need to obtain more efficient utilization of street space and parking space in our urban areas. As motor vehicle use has increased, pavement widths have been widened at the expense of sidewalks and boulevards. The public is finally reacting to this trend, demanding reductions in the allocation of further lands to satisfy the voracious demands of the automobile. The cry to-day is for rapid transit. Little thought is given to the fact that rapid transit and private automobile transportation are complementary rather than competitive services. No matter how extensive and efficient the rapid transit system may be, there will always remain a substantial percentage of people who, because of their preference for a door to door service, and the need to use their automobile for work or their circuitous travel requirements, will continue to use the automobile.

An increasing number of families can now afford a second car and a large proportion of these are finding it both economical and convenient to purchase a small car to meet their auxiliary needs. With a second car a family no longer needs an all-

ST. GEORGE

purpose car. The second or third car can be designed for travel exclusively within urban areas. It should be stripped down to minimum dimensions to achieve maximum utilization of street and parking space and it should be electrically powered. There are several advantages with this type of propulsion; it does not emit pollutants; it is practically noiseless and the motor has few moving parts, facilitating maintenance. The only draw-back is the absence, at the present time, of a suitable battery or fuel cell. A hybrid system, using a small supplementary external combustion engine can be used until a practical battery or fuel call is developed.

A study conducted by the British Government comparing the relative efficiencies of the standard-sized British car and a hypothetical mini town-car in terms of passenger carrying and parking capacities shows that the mini car has advantages in almost every aspect. The advantages of the mini car over the large-sized North American vehicle would be still greater.

The efficiency of the mini car can be further increased if ownership is in the hands of a rental agency or a public body. In this way, multiple use is obtained and fewer cars are required for a given number of trips. The vehicles can be stored in multi-storied mechanical garages to reduce the present profligate use of valuable land in downtown areas for parking. Public or agency ownership simplifies the problem of removing a vehicle from the garage as the most accessible rather than a particular vehicle would be supplied. To maximize the efficiency of these small vehicles as passenger carriers, they should accommodate no more than four adults, and since the average car occupancy rate varies between 1.5 and 1.8, a large proportion could be designed as two seaters.

There have been several recent proposals to build satellite cities on the outskirts of Metropolitan Toronto, which would be ideal locales to carry out demonstration projects with mini cars. Several blocks surrounding the centre of these cities should be reserved for use by mini vehicles, and such areas would be characterized by wide sidewalks, boulevards and squares and would be pedestrian oriented. These vehicles could be garaged underground at the city centre, and the roof used as a large pedestrian square.

Commercial vehicles of standard width, which are necessary to service the inner city, could be allowed to use the mini roadways outside peak hours. These vehicles would straddle the dividing line between adjacent mini lanes. Assuming a 5' width for a mini vehicle a 28' roadway would accommodate four 7' lanes for mini cars during peak hours or 2 lanes of mini cars and one for commercial vehicles during off peak hours. If it is assumed that the average family will use two cars—the standard family car and a mini car, it would be profitable to locate residential developments outside the inner city. Residents could then use the mini roadways to enter the city, and the freeways and arterials surrounding the town centre, for trips outside the centre of town.

This proposal is no more than a concept. It needs to be tried out on a demonstration project, where both the technological and sociological aspects can be tested and adjustments made to fit a real life situation; only then would there be justification for considering these mini vehicles for use in a metropolis, such as Toronto, with established housing, office, business, factory and street patterns.

If the mini cars find acceptance on a limited scale, their use can then be extended to the downtown section of Toronto. A significant problem would be the integration of these small sized vehicles with standard-sized cars and trucks. However, this is, but a question of magnitude, as already, there are vehicles of all sizes, varying from motorcycles and small imported compacts to wide trucks using the city streets. Measures to separate the mini vehicles from the other traffic could be introduced when warranted by the proportion of these vehicles to the main traffic stream. Initially, one traffic lane could be reserved for two lanes of mini cars, during rush hours and as a later development, certain streets in one direction could be reserved for mini cars.

A suggested interim arrangement of one-way streets with complete separation of mini and standard automobiles during rush hours is needed. A lane width of 14' adjacent to the right side curb is reserved for two streams of mini vehicles. All turning movements for mini vehicles are made by right turns, whereas all standard sized automobiles turn left. Outside of rush hours, in the interim period, it may be desirable to allow delivery trucks and standard sized automobiles to use the right hand curb lanes. A distinctive lane marking for these lanes would help to overcome any reluctance on the part of drivers of large vehicles from straddling or crossing the mini lane separator. As the proportion of mini vehicles increase, two more 7' lanes can be introduced and the remaining width of 22' divided into two 11' lanes for standard automobiles. A 50' street now carries four lanes. Divided as proposed it can accommodate six traffic lanes, two for standard automobiles and four for mini vehicles, a 50% increase in vehicle capacity.

"The building of a new transportation facility within the proposed Metro Centre Complex will open up a wide range of new possibilities. Unparalleled opportunities will be presented to ease the lot of commuters, including provision of convenient transfer arrangements between road, rail, air, GO transit, and subway systems. With sound planning and wise decision making it may yet be possible to make it a pleasure for people to travel to, in and around Metro Toronto".

REFERENCES:

(1) 'The Potential for Bus Transit' Wilbur Smith and Associates for Automobile Manufacturers Association Page 6

(2) Report C-4 'People on the Go' (1968) Department of Highways of Ontario.

(3) 'An Evaluation of Commuter Transportation Alternatives' Charles A. Hedges, U.S. Department of Transportation -HRB January, 1969.

Destruction of Urban Space

(continued from page 16)

THEORETICAL FOUNDATIONS OF SPACE

Despite the overwhelming momentum of the metropolis to sprawl across whole regions, numerous concepts have been put forward recently to come to terms with three-dimensional space at the urban core. Analytically, the "access tree" developed by the Regional Plan Association in New York appears to be a very penetrating example. A variety of ideas have appeared in urban transportation, usually a form of minicar or minitrain, some with dual modes of movement (e.g., track and non-track) and new systems of propulsion and guidance. All have significance for expanding the dynamics of urban space.

But major improvements in utilizing the crucial third dimension will also require broad new conceptions of the varied functional and social values of space. A relatively few basic concepts are needed which call into existence hundreds of innovations and particular applications.

To underscore the practical and theoretical importance of three-dimensional urban space, a series of brief propositions are presented here. These are made within the context of an analogy to money in the economic system. The analogy is used only to present the approach, not to substantiate it.

A. Urban Space is a *created resource* based on land, a natural resource—comparable to money, another created resource, which is based on property, goods, and services.

B. Space is the most common and inclusive *medium* of urban development—just as money is the most common and inclusive medium of economic development.

C. Three-dimensional space injects many possibilities into the static attributes of land to convert it into a *dynamic urban system*—just as money injects possibilities into inert property, goods, and services to mobilize them into a highly productive system.

D. Numerous highly articulate *institutional devices* are required to promote the effective use of the third dimension of space in urban development—just as there are many elaborate and highly articulate institutions and techniques to maximize the use of money in economic development.

E. *Special Space Design Techniques* are required for the development of urban space—just as special financial methods are utilized for economic development.

F. *Interlocking levels* of initiative, design, and control are necessary to assure best overall urban space development—just as interlocking levels of control and initiative assure maximum economic development.

These six propositions infer the potential development of innumerable concepts of three-dimensional urban space, comparable to the varied, complementary— and contradictory—concepts of economics. The inference may also be made that space, when understood as the most common and inclusive medium of urban development, could have as much evolutionary significance for human organization as the stream of economic innovations have had throughout the past century.

To further pry open the practical and theoretical significance of urban space another series of propositions are set forth below. These are

more substantive, and state the beginnings of a particular theoretical approach. However, they are only in sketchy outline, make no pretense of being comprehensive, and offer virtually no supporting arguments. The emphasis remains with the theoretical importance of space, not the particular propositions.

A. *Function.* The city is by its nature an intense centre of human activities, compact so as to *facilitate communication* and to *minimize the need for transportation.*

B. *Human Scale.* Man is finite in size and most of the urban spaces suitable to his normal behaviour, perceptions, and feelings are also finite "at the human scale." However, the human scale is highly variable, depending upon the purposes and circumstances of given activities. Furthermore, large-scale open space is necessary in close proximity to all people as a counterpoint to the compact functional and social urban environment. In compact medieval villages the fields and forests provided the counterpoint naturally. Thus a complete range of urban spaces—all in the human scale— from the most compact to the most open and spacious need to be provided for.

C. *Urbanity.* Human associations and organizations *for* the individual person are very largely defined by the location, scale, form, and other qualities of urban spaces, and by the buildings and other elements that organize those spaces. The levels of social vigour, varied interest, and visual excitement afforded by these spaces are what contribute most to a city's urbanity.

D. *Complementarity.* Transportation and land-use activities each requires the other to be as close as possible. But their proximity on one plane in large cities creates intolerable congestion. However, when integrated at two or more planes they may operate smoothly and efficiently together.

E. *Conservation.* Considering the foregoing propositions, a city works best when its requirements for buildable land and facilities can be minimized, because the expanded consumption of one leads to an expanded consumption of the other—and to increased demands upon human energy, as well as increased *social* isolation between people. It is physically impossible to preserve large open spaces in reasonable proximity to people when millions of people are spread out in uniform low densities. The barrack-like development of land leaves people with a monotony of urban space and form at the scale of the street and private yard. The unclustered low densities minimize or eliminate use of efficient public transport. The increasingly monopolistic automobile, despite its reputed flexibility, deprives the non-driving half of the population of reasonable means to travel, and now requires a very large part of all developed urban land. Its traffic and the uncongenial environment created by its services contribute to a deterioration of the entire urban environment. The net effect is an increased consumption of resources, a non-integration of urban activities, a waste of land (especially of major urban open spaces), a separation of families and individuals from the varied excitements of community participation (we have even forgotten that such exists, and evaluate neighbors mostly for their annoyances).

FUNCTIONAL USES OF SPACE

At present, urban functional efficiency is not only abysmally low, but this "macrocosmic" level of activity appears to become more inefficient as the "microcosmic" productiveness of particular systems steadily improves. Moreover, very little attention is paid directly to this problem.

Improvement of "urban productivity" rests largely on a rational placement of functions and a simple plan for movement. The first and more critical step is to design the city to minimize the need for any formal transportation at all. This is what Ford did first in his plant, prior to developing his assembly line, through a sequential placement of machines and processes and the use of slides and minor conveyors between them. We have not tried to do this for cities, and so we have few methods or principles to assist us.

The valuable potential of developing effective urban space systems is that more functions can be integrated in far closer proximity at major nodal points of each city for a vast saving of space, time, and money. Through appropriate shielding arrangements in these centres it is possible to combine commercial and industrial activities with varied living arrangements in

one complex with no nuisance effects at all. Commuting, as we conceive it, could be largely avoided, thereby eliminating the major source for congestion. Furthermore, large open spaces could be preserved in the immediate vicinity of each nodal concentration.

For example, we now build massive parking garages in our apartment buildings and then other massive garages in our office buildings and stores, as well as huge lots at the factories. Would it not be beneficial all around to design the urban nodules with the shops, offices, and even factories in the kinds of spaces now given to the massive garages. And if we should still feel compelled to *own* a car after we no longer need it for commuting or shopping then we should at least remove it far enough so that it cannot congest the major urban activities and pre-empt the heart of urban life.

The second step follows naturally from the first. With major nodal points in the city, it then becomes possible to build a highly rational, effective, and versatile transportation system at far lower costs which provides superior service to all remaining needs for movement. Ford's major assembly line was the beneficial end result of a rational placement of activities supplemented with special local arrangements of transfer.

Improving urban efficiency as a whole by well-designed nodal developments leads directly to solutions to certain problems of urban form, particularly the unavailability of large open spaces, and the general chaos accompanying urban sprawl. If urban sprawl begins in part as a means of escaping the old central city, the urge to escape farther out is certainly increased in many localities by the resulting suburban disarray, especially by the generation of greater and greater congestion at lower and lower densities and by the necessity to travel longer distances in all directions for essential services. If the resident is presented with the possibility of eliminating commuting (and its congestion), of having the choice of walking, driving, or riding freely available to him, of having all kinds and sizes of open space closely by (especially the larger ones), and if all of this can be had at a significant cost saving to him (which it should), it is then very likely that the mass compulsion systematically and simultaneously to destroy both openness and urbanness will abate itself.

But at this time of urban crisis the most critical question of urban form is the *social* formlessness. Ultimately, the social form of the city outweighs even the achievement of maximum efficiency, although it appears that the two interests are quite complementary.

Although this is not the place to examine the underlying social issues, it seems that modern man must recover for himself and revitalize the primary forces of *social* organization, which over the past two centuries have declined and become subordinated to economics and technology, as governed by the Establishment. This is a loss we have not yet even evaluated, though we can feel it, and though it is very much at the heart of the urban crisis. In some manner the recovery is likely to evolve around what we now all-too-vaguely call community. At minimum, a human or social distinctiveness (as separate from economic distinctiveness) needs to be fashioned in the urban environment. In any case, many varied experiments of living arrangements are called for, and highly developed nodal centres of the city offer excellent points of departure.

Social distinctiveness will mean structuring the environment to enlarge the human significance of life in society. It will relate a person's normal experiences so as to enhance their social and emotional coherence, while creating deeper interpersonal meaning, greater personal stimulation and excitement, and more varied satisfactions.

In urban development the distinctiveness may be founded upon a number of qualities or principles shaped into the urban design. First, the physical setting of each local area might be unified by clearly defining its centre and periphery, as well as relating it to the larger metropolitan structure. This identity and integrity will advance the ability of the people to organize themselves around common interests and more effectively face common problems.

Second, local living, working, recreation, education, and health activities may be formed into a physically coherent whole, as well as related to the larger metropolitan scene. The emphasis will be put on the functional efficiency (or convenience) of the individual's daily rounds and the social importance of the most common activities of life.

Third, the physical form will accommodate a limited diversity of locally rooted and locally responsive economic, social political, and cultural institutions, which may also be affiliated or federated on a metropolitan level. The problem is to balance the values of variety and familiarity without making them either bewildering or stultifying. Thus the objective of the principles is a scale and a structure of area, population, functions, and institutions which is balanced to be as relevant as possible to the realities of the human personality. That

is, it will be relatively diverse to serve varied interests and yet small enough for most persons to be significant participants.

These or comparable qualities present a new purpose and pointedness to urban design, and yet call forth innumerable possibilities for particular application. And when we examine the range of design opened by a full use of the third demension of urban development, it is evident that an astonishing wealth of urban forms linked to precise social objectives awaits vigorous action.

In striving for social distinctiveness and urban efficiency, utilization of the third dimension makes it practical to *unite* and *integrate* diverse activities without creating detrimental effects. By the use of large or closely integrated structures, it is possible for offices, stores, and many industrial facilities to be joined with housing and transportation for numerous functional benefits. Probably the greatest in a social accounting would be that of the individual, who is not *forced* to travel so much or to own a car, and who is then freer in his use of time and money. And, if the design is well thought out, achieving a social coherence with many implicit open-ended possibilities, a profound urban renaissance might well be stimulated at the grass roots. Can there be a superior goal for planning?

Three-dimensional space also provides a basis to *organize* and *accent* urban form and activities. Facilities may be designed for multiple use and related use, not particularly to save money but to encourage many kinds of cooperation, to facilitate such intangible values as chance meetings between persons, and to establish several degrees of relationship as well as to enliven the relationship between active participants and passive observers in various roles.

While some activities may be delicately interwoven, others may benefit by greater differentiation. For example, various small urban spaces may be contrasted more sharply with various large open and natural spaces. Yet they can remain close to one another: When development is centred at concentrated points, a man may live but a five-minute walk from both a forest preserve or a vitally active community-centre plaza. The concentration makes both the urban and pastoral qualities of life more freely accessible. At present, both are dissipated and often lost.

The present monotony of urban space, whether of high or low density, approaches a systematic destruction of urban space because it does not accent and articulate the varying *human* needs for space. And it imposes a sterility upon design. We cannot seem to break away from our tenement complex of building multiple dwellings as stacked family isolation cells. Interior spaces are still typically organized solely about the individual dwelling unit, and have no relationship to external spaces. Structures rise vertically in towers or slabs with uniform floors planned around double-loaded corridors, though here Habitat '67 presents a welcome break.

We have yet to conceive of both *physical* and *social* integration of transportation, work areas, commerce, living space, internal and external play and participation areas in the vertical as well as the horizontal dimension. Philadelphia and Stockholm at their centres, Paris in the new development at La Défense, and a few other cities are advancing on a physical integration of space in three dimensions for functional and economic purposes as well?

Another major problem revealing possibilities of resolution through three-dimensional urban space is environment pollution. The Experimental City proposed by Athelstan Spilhaus has attacked the problems of water, air, and noise pollution by technological devices which are planned beneath the city. However, the main possibility of eliminating much of the source of pollution—especially the worst pollution of all, that of the cluttered environment—is simply the building of a city which does not waste the larger part of the land and resources invested in it.

A basically more efficient city will demand less, and this will permit men to choose an enormously greater variety of ways to utilize the growing capacities of the productive system. For example, if the automobile is re-evaluated and used almost entirely for the recreation and enjoyment of the family, it then becomes possible to reduce massively the number of vehicles in the city. Fewer cars alone will reduce the need for costly highways and parking facilities while permitting fewer service shops and dismantling yards, less asphalt and cement operations, and less petroleum, steel, rubber, chemical, and glass plants. Consequently, along with less pollution, there should be more free time and greater wealth to make freer choices among a larger variety of alternatives of behaviour.

The implications of fully exploiting the physical, economic, social, and cultural possibilities of urban space for professional consideration are many. I will mention two which have a particular bearing on current planning practice.

The concept of population density requires

reappraisal. Low densities do not in themselves assure increased social value, and may be detrimental. To maximize the benefits of all kinds of urban spaces, from the most enclosed and intense to the most open, we might well seek *very high net densities* and *very low gross densities*.

Second, subdivision and zoning procedures are now oriented to land rather than space as the organizing principle of urban development. Both are primarily suited to the *segregation* of urban activities rather than to articulating their *integration*. Furthermore, a vertical integration of transportation, public facilities, and living spaces with commercial and certain industrial activities presumes a more unitary development procedure than that now afforded by many private land developers and public regulating bodies. Of necessity, new instruments will be required before new practices can be properly initiated.

The question may be asked, then, will changes in taste come about merely as the result of new methods of urban development? I am certain that new urban patterns will be accepted when there are a sufficient number of examples to demonstrate the important physical, economic, and social advantages of greatly improved urban space, particularly the immediately accessible open spaces and the immediately available urbanity of central urban areas. Reston, Virginia, is a minor example of both. Seward's Success, recently announced near Anchorage, Alaska, may become another. The best examples will demonstrate a new urban freedom, not only to make a real choice between walking, riding, or driving, but of the life style itself, a freedom very nearly lost in most of America.

A dynamic concept of urban space should be equally useful in North Platte and New York. It accents the distinction between large open spaces with little or no building, and large building masses with small or medium-sized open spaces included. Given populations and acreages become significant only when physical, economic, and social criteria are applied. These, in turn, can be managed by the many varieties of clustering of both building masses and open spaces that are possible in city building. Hence, in principle, it makes little difference whether we are dealing with a town of five thousand people or a metropolis of five million.

CRISIS OF THE ENVIRONMENT

Back in 1955, John von Neumann, the mathematician and scientist, wrote that "the great globe itself is in a rapidly maturing crisis—a crisis attributable to the fact that the environment in which technological progress must occur has become both undersized and underorganized."

Von Neumann's concern is real, but hardly the important problem. The larger reality is precisely a crisis of *humanism* of the environment. The problem is that the human environment has been pre-empted, distorted, and fractured by technology. Furthermore, technology's momentum, assured by the affluence of the Establishment, now promises us more of the same.

It is all very well for men to claim, as they should, that the earthly environment is the property of man *as man*. But the mainly flat surface of the earth so dear to men will not be theirs until they effectively make the third dimension of cities fully operational. That will require the good services of technology. And it will help put technology in its environmental place. To do these things, the properties of the third dimension of cities need to be sought out for a resolution to the "undersized and underorganized" environment.

The enormous importance of elevating the *organization* of the city from the second to the third dimension cannot be minimized. It will require a profound reformation of our perceptions of the environment. Our conceptual heritage is pastoral solitude, requiring a constant struggle and accommodation with the natural elements. But our new reality is the enormity of megalopolis, which is destroying many of the most endearing qualities of the environment. What is required is a stern taming of our great technological capacities, parallel with a distinctive social articulation of the masses of human activity. If man wants a degree of environmental congeniality and social esprit, with cities consisting of the most diverse qualities of life set in harmonious composition, he must make many new departures. Some will be radical. To continue on the present course will surely accelerate the environmental deterioration and frustrate efforts to contain the increasingly widespread floodwaters of the urban crisis.

Horace Greeley's original advice to go West came directly out of the American Dream—a dream of a new horizon over every new hill. Now that dream has been long spent. Greeley would know this very well if he could return. He might contribute to the progress of a new frontier in American mythology and give us some additional advice: "Go into space, young man—urban space."

(suite de la page 22)

qu'elle continuera indéfiniment dans cette voie.

Cette perspective nous fait peur parce que nous projetons vers l'avenir l'image déformée et grossissante du passé. Cette vision de l'avenir est monstrueuse.

Mais elle est complètement fausse. Toute tendance contient en elle le germe de l'erreur et, tôt ou tard, rencontre son point de rupture. Ce renversement de tendance pourra être précipité si l'homme le désire vraiment et passe à l'action. La ville sera monstrueuse si l'homme la fait monstrueuse; par contre, elle sera humaine si telle est son oeuvre.

Les deux principales causes de la croissance démesurée de la ville machiniste sont l'infrastructure du transport et l'éparpillement.

A Montréal, 50 pour cent de la surface totale de la ville est dévolue aux rues, au stationnement, etc. La ville postmachiniste peut réduire ce pourcentage de moitié notamment par l'utilisation de taxis électroniques sans chauffeur. Quant à l'éparpillement, il sera corrigé par un regroupement des fonctions dans un environnement de densité beaucoup plus forte (vingt fois plus, avons-nous dit).

La combinaison de ces deux facteurs permettrait de construire une ville qui abriterait la même population mais qui n'occuperait que 25 pour cent de l'espace actuellement bâti. Et tout cela peut se faire sans construire un seul édifice de plus de vingt étages.

La ville électronique ne sera monstrueuse ni horizontalement, ni verticalement. Elle sera minuscule, compacte et efficace. Et elle permettra surout des contacts personnels accrus puisque tout sera beaucoup plus près de tout. L'homme électronique, plus que jamais, demande des contacts humains fréquents et intenses afin d'instaurer la participation et l'échange.

Dans tout acte de planification ou d'organisation du milieu, il faut se souvenir d'un principe: la ville n'est qu'un outil. Quand l'outil se brise, on le répare, quand il devient désuet, on le remplace par un meilleur. O

COMMUNITY PLANNING ASSOCIATION OF CANADA
ASSOCIATION CANADIENNE D'URBANISME

NATIONAL PRESIDENT:
Claude Langlois, C.U.Q., MTPIC, Laval, P.Q.

VICE-PRESIDENTS:
J. Paul Melin, P.Eng., Saskatoon, Sask.
Hans Foerstel, Halifax, N.S.

IMMEDIATE PAST PRESIDENT:
Allan G. Moffatt, P.Eng., Winnipeg, Man.

NATIONAL COUNCILLORS:
John D'Eath, Vancouver, B.C.
Frank Byrne, Calgary, Alta.
Manley LaFoy, Regina, Sask.
W.R. Milner, Selkirk, Man.
Mrs. H.A. Elliott, Kingston, Ont.
Claude Delisle, Sept-Iles, P.Q.
George B. Mackie, Saint John, N.B.
Mrs. S. Hudson, Halifax, N.S.
Hon. Mr. Justice J.D. Higgins, St. John's, Nfld.

COUNCILLORS-AT-LARGE:
Mrs. M.J. Lambert, Ottawa, Ont.
Dr. R.W. Collier, Vancouver, B.C.
C. Lefebvre, Laval, P.Q.
D.W. Middleton, P.Ag., Toronto, Ont.

NATIONAL DIRECTOR AND REVIEW EDITOR:
Ernest F. Tonge

ASSISTANT EDITOR:
Michael Fowlie

NATIONAL OFFICE:
425 rue Gloucester St., Ottawa, Ont. K1R-5E9

DIVISIONAL STAFF:
R. Guy Spencer,
201-525 Seymour St., Vancouver 2, B.C.
Jack Moar,
206 Phillips Bldg., Edmonton, Alta.
Mrs. B.C. Callum,
2817 Wascana St., Regina, Sask.
Mrs. M. Gillies,
201-75 Albert St., Winnipeg 2, Man.
Mrs. J. Tonge,
30 Bloor St. W., Toronto 5, Ont.
Jacques Ledoux,
51 rue d'Auteuil, Québec 4, P.Q.
A.G. Watt,
P.O. Box 501, Saint John, N.B.
Miss J. Lamey,
P.O. Box 211, Halifax, N.S.
Miss C. Corbett
Supreme Court Bldg.
St. John's Nfld.

"The city does not belong to the automobile."

ONTARIO PREMIER
HON. WILLIAM G. DAVIS
JUNE 3, 1971